REQUEST FOR PROPOSALS

FEASIBILITY STUDY FOR THE

STUDY OF DISTRIBUTED ENERGY COMBINED COOLING HEAT AND POWER TRI-GENERATION PROJECTS

Submission Deadline: **12:00 PM (NOON)**

LOCAL TIME

OCTOBER 18, 2010

Submission Place: Division of Oil and Natural Gas, Department of Oil and Natural Gas
National Energy Administration (NEA)
No. 38 S. Yuetan Street
Beijing 100824
People's Republic of China

SEALED PROPOSALS SHALL BE CLEARLY MARKED AND RECEIVED PRIOR TO THE TIME AND DATE SPECIFIED ABOVE. PROPOSALS RECEIVED AFTER SAID TIME AND DATE WILL NOT BE ACCEPTED OR CONSIDERED.

REQUEST FOR PROPOSALS

Section 1: INTRODUCTION

The U.S. Trade and Development Agency (USTDA) has provided a grant in the amount of US$465,482 to National Energy Administration (the "Grantee") in accordance with a grant agreement dated May 26, 2010 (the "Grant Agreement").

The FS will include a technical, economic, and financial assessment of implementing distributed energy combined cooling, heat and power tri-generation (also known as distributed energy combined cooling, heat and power (DE-CCHP)) technology in two model facilities.

China is implementing a much larger National Distributed Energy Combined Cooling, Heat and Power Tri-generation (DE-CCHP) Model Projects Program conducted by the National Energy Administration (NEA). The main purpose is to use DE-CCHP replacing existing partial conventional energy. U.S.-China Energy Cooperation Program (ECP) will participate in DE-CCHP Project. The project will be funded by USTDA and two model projects will be examined in the study.

The Grant Agreement is attached at Annex 4 for reference. The Grantee is soliciting technical proposals from qualified U.S. firms to provide expert consulting services to perform the Feasibility Study.

1.1 BACKGROUND SUMMARY

Utilization of distributed energy and combined cooling, heat and power tri-generation (DE-CCHP) represents a highly efficient and near-term technology solution to help meet China's energy and environmental goals. On average, DE-CCHP systems, which use waste heat from electricity generation for heating, cooling, humidity control, air conditioning and a range of thermal energy needs, are more efficient than conventional power generation systems.

DE-CCHP will allow China to produce power and thermal energy more reliably by reducing dependence on central coal-fired power plants. DE-CCHP also provides China with significant opportunities to improve energy efficiency and reduce greenhouse gas emissions from industrial, commercial, and institutional energy consumers. In addition, DE-CCHP will facilitate energy diversification by utilizing China's increased access to natural gas and vast renewable resources, and exploiting waste heat and waste gas opportunities from heavy industries. Finally, DE-CCHP will offer a practical approach to improving China's district heating infrastructure by providing an energy efficient heat supply.

China's plans to dramatically increase its DE-CCHP capacity represent opportunities for U.S. companies who are industry leaders in DE-CCHP. Many of the most recent and highly technical DE-CCHP solutions are not yet available in China. U.S. Company interest in pursuing the resulting demand for DE-CCHP technologies and services have been demonstrated in part through the formation of the US-China Energy Cooperation Program's (ECP) Distributed Energy

and Combined Heat and Power Working Group and its member companies' active pursuit of DE-CCHP opportunities in China.

In consultation with the Decentralized Power Generation and Combined Cooling, Heat and Power Working Group of the ECP, the feasibility study is to provide NEA and the relevant facilities with technical assessments and recommendations. It will involve market and economic conditions and study how to promote DE-CCHP system development in China in alignment with NEA's goals.

A background Definitional Mission is provided for reference in Annex 2.

1.2 OBJECTIVE

The purpose of this project is to identify two model projects that fit China's national distributed energy combined cooling, heat and power tri-generation model program and to analyze their feasibilities. This project will showcase the selected technology, and will promote Sino-U.S. cooperation in the areas of decentralized energy's key technology and equipment.

The Terms of Reference (TOR) for this Feasibility Study are attached as Annex 5.

1.3 PROPOSALS TO BE SUBMITTED

Technical proposals are solicited from interested and qualified U.S. firms. The administrative and technical requirements as detailed throughout the Request for Proposals (RFP) will apply. Specific proposal format and content requirements are detailed in Section 3.

The amount for the contract has been established by a USTDA grant of US$465,482. **The USTDA grant of US$465,482 is a fixed amount. Accordingly, COST will not be a factor in the evaluation and therefore, cost proposals should not be submitted**. Upon detailed evaluation of technical proposals, the Grantee shall select one firm for contract negotiations.

1.4 CONTRACT FUNDED BY USTDA

In accordance with the terms and conditions of the Grant Agreement, USTDA has provided a grant in the amount of US$465,482 to the Grantee. The funding provided under the Grant Agreement shall be used to fund the costs of the contract between the Grantee and the U.S. firm selected by the Grantee to perform the TOR. The contract must include certain USTDA Mandatory Contract Clauses relating to nationality, taxes, payment, reporting, and other matters. The USTDA nationality requirements and the USTDA Mandatory Contract Clauses are attached at Annexes 3 and 4, respectively, for reference.

Section 2: INSTRUCTIONS TO OFFERORS

2.1 PROJECT TITLE

The project is called The Study of Distributed Energy Combined Cooling, Heat and Power Tri-generation Model Projects.

2.2 DEFINITIONS

Please note the following definitions of terms as used in this RFP.

The term "Request for Proposals" means this solicitation of a formal technical proposal, including qualifications statement.

The term "Offeror" means the U.S. firm, including any and all subcontractors, which responds to the RFP and submits a formal proposal and which may or may not be successful in being awarded this procurement.

2.3 DEFINITIONAL MISSION REPORT

USTDA sponsored a Definitional Mission to address technical, financial, sociopolitical, environmental and other aspects of the proposed project. A copy of the report is attached at Annex 2 for background information only. Please note that the TOR referenced in the report are included in this RFP as Annex 5.

2.4 EXAMINATION OF DOCUMENTS

Offerors should carefully examine this RFP. It will be assumed that Offerors have done such inspection and that through examinations, inquiries and investigation they have become familiarized with local conditions and the nature of problems to be solved during the execution of the Feasibility Study.

Offerors shall address all items as specified in this RFP. Failure to adhere to this format may disqualify an Offeror from further consideration.

Submission of a proposal shall constitute evidence that the Offeror has made all the above mentioned examinations and investigations, and is free of any uncertainty with respect to conditions which would affect the execution and completion of the Feasibility Study.

2.5 PROJECT FUNDING SOURCE

The Feasibility Study will be funded under a grant from USTDA. The total amount of the grant is not to exceed US$465,482.

2.6 RESPONSIBILITY FOR COSTS

Offeror shall be fully responsible for all costs incurred in the development and submission of the proposal. Neither USTDA nor the Grantee assumes any obligation as a result of the issuance of this RFP, the preparation or submission of a proposal by an Offeror, the evaluation of proposals, final selection or negotiation of a contract.

2.7 TAXES

Offerors should submit proposals that note that in accordance with the USTDA Mandatory Contract Clauses, USTDA grant funds shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in the Host Country.

2.8 CONFIDENTIALITY

The Grantee will preserve the confidentiality of any business proprietary or confidential information submitted by the Offeror, which is clearly designated as such by the Offeror, to the extent permitted by the laws of the Host Country.

2.9 ECONOMY OF PROPOSALS

Proposal documents should be prepared simply and economically, providing a comprehensive yet concise description of the Offeror's capabilities to satisfy the requirements of the RFP. Emphasis should be placed on completeness and clarity of content.

2.10 OFFEROR CERTIFICATIONS

The Offeror shall certify (a) that its proposal is genuine and is not made in the interest of, or on behalf of, any undisclosed person, firm, or corporation, and is not submitted in conformity with, and agreement of, any undisclosed group, association, organization, or corporation; (b) that it has not directly or indirectly induced or solicited any other Offeror to put in a false proposal; (c) that it has not solicited or induced any other person, firm, or corporation to refrain from submitting a proposal; and (d) that it has not sought by collusion to obtain for itself any advantage over any other Offeror or over the Grantee or USTDA or any employee thereof.

2.11 CONDITIONS REQUIRED FOR PARTICIPATION

Only U.S. firms are eligible to participate in this tender. However, U.S. firms may utilize subcontractors from the Host Country for up to 20 percent of the amount of the USTDA grant for specific services from the TOR identified in the subcontract. USTDA's nationality requirements, including definitions, are detailed in Annex 3. Please note that the Contractors and all subcontractors shall be excluded from any future equipment procurement that arises from the specific recommendations made in the FS

2.12 LANGUAGE OF PROPOSAL

All proposal documents shall be prepared and submitted in English and Chinese.

2.13 PROPOSAL SUBMISSION REQUIREMENTS

NEA will only accept hard copy proposals accompanied by an electronic copy on CD-ROM delivered by mail. The cover letter should be signed by the bidding company's authorized person. If the bidding company has a negotiator, the negotiator's information should be provided as a separate document.

The **Cover Letter** in the proposal must be addressed to:

To: Ms. Wang Jing
Deputy Director
Division of Oil and Natural Gas, Department of Oil and Natural Gas
National Energy Administration (NEA)
No. 38 S. Yuetan Street
Beijing 100824
People's Republic of China

Phone: 8610-6850-1603
Fax: 8610-6850-2074
E-mail: wangj@ndrc.gov.cn

An Original and eight (8) copies of your proposal must be received at the above address no later than 12:00 pm (noon), on October 18, 2010.

The Offeror shall be responsible for actual delivery of the proposal to the above address before the deadline. Any proposal received after the deadline will be returned unopened. The Grantee will promptly notify any Offeror if its proposal was received late.

Upon timely receipt, all proposals become the property of the Grantee.

2.14 PACKAGING

The original and each copy of the proposal must be sealed to ensure confidentiality of the information. The proposals should be individually wrapped and sealed, and labeled for content

including "original" or "copy number x"; the original and eight (8) copies should be collectively wrapped and sealed, and clearly labeled.

Neither USTDA nor the Grantee will be responsible for premature opening of proposals not properly wrapped, sealed and labeled.

2.15 AUTHORIZED SIGNATURE

The proposal must contain the signature of a duly authorized officer or agent of the Offeror empowered with the right to bind the Offeror.

2.16 EFFECTIVE PERIOD OF PROPOSAL

The proposal shall be binding upon the Offeror for NINETY (90) days after the proposal due date, and Offeror may withdraw or modify this proposal at any time prior to the due date upon written request, signed in the same manner and by the same person who signed the original proposal.

2.17 EXCEPTIONS

All Offerors agree by their response to this RFP announcement to abide by the procedures set forth herein. No exceptions shall be permitted.

2.18 OFFEROR QUALIFICATIONS

As provided in Section 3, Offerors shall submit evidence that they have relevant past experience and have previously delivered advisory, feasibility study and/or other services similar to those required in the TOR, as applicable.

2.19 RIGHT TO REJECT PROPOSALS

The Grantee reserves the right to reject any and all proposals.

2.20 PRIME CONTRACTOR RESPONSIBILITY

Consistent with USTDA's Nationality Requirements and the provisions of the Grant Agreement, Offerors have the option of subcontracting parts of the services they propose, except the Offerors are required to utilize the services of Beijing Huajian Power Design and Research Institute (BHJ) as a host country subcontractor to perform $56,484 worth of services under Task 2 of the Terms of Reference. Reference Annex 1 for additional information on BHJ.

The Offeror's proposal must include a description of all anticipated subcontracting arrangements, including the name, address, and qualifications of all subcontractors. USTDA nationality provisions apply to the use of subcontractors and are set forth in detail in Annex 3. The

successful Offeror shall cause appropriate provisions of its contract, including all of the applicable USTDA Mandatory Contract Clauses, to be inserted in any subcontract funded or partially funded by USTDA grant funds.

2.21 AWARD

The Grantee shall make an award resulting from this RFP to the best qualified Offeror, on the basis of the evaluation factors set forth herein. The Grantee reserves the right to reject any and all proposals received and, in all cases, the Grantee will be the judge as to whether a proposal has or has not satisfactorily met the requirements of this RFP.

2.22 COMPLETE SERVICES

The successful Offeror shall be required to (a) provide local transportation, office space and secretarial support required to perform the TOR if such support is not provided by the Grantee; (b) provide and perform all necessary labor, supervision and services; and (c) in accordance with best technical and business practice, and in accordance with the requirements, stipulations, provisions and conditions of this RFP and the resultant contract, execute and complete the TOR to the satisfaction of the Grantee and USTDA.

2.23 INVOICING AND PAYMENT

Deliverables under the contract shall be delivered on a schedule to be agreed upon in a contract with the Grantee. The Contractor may submit invoices to the designated Grantee Project Director in accordance with a schedule to be negotiated and included in the contract. After the Grantee's approval of each invoice, the Grantee will forward the invoice to USTDA. If all of the requirements of USTDA's Mandatory Contract Clauses are met, USTDA shall make its respective disbursement of the grant funds directly to the U.S. firm in the United States. All payments by USTDA under the Grant Agreement will be made in U.S. currency. Detailed provisions with respect to invoicing and disbursement of grant funds are set forth in the USTDA Mandatory Contract Clauses attached in Annex 4.

Section 3: PROPOSAL FORMAT AND CONTENT

To expedite proposal review and evaluation, and to assure that each proposal receives the same orderly review, all proposals must follow the format described in this section.

Proposal sections and pages shall be appropriately numbered and the proposal shall include a Table of Contents. Offerors are encouraged to submit concise and clear responses to the RFP. Proposals shall contain all elements of information requested without exception. Instructions regarding the required scope and content are given in this section. The Grantee reserves the right to include any part of the selected proposal in the final contract.

The proposal shall consist of a technical proposal only. A cost proposal is NOT required because the amount for the contract has been established by a USTDA grant of US$465,482, which is a fixed amount.

Offerors shall submit one (1) original and eight (8) copies of the proposal. Proposals received by fax cannot be accepted.

Each proposal must include the following:

Transmittal Letter,
Cover/Title Page,
Table of Contents,
Executive Summary,
Company Information,
Organizational Structure, Management Plan, and Key Personnel,
Technical Approach and Work Plan, and
Experience and Qualifications.

Detailed requirements and directions for the preparation of the proposal are presented below. The information requirements are waived for the required subcontractor, BHJ.

3.1 EXECUTIVE SUMMARY

An Executive Summary should be prepared describing the major elements of the proposal, including any conclusions, assumptions, and general recommendations the Offeror desires to make. Offerors are requested to make every effort to limit the length of the Executive Summary to no more than five (5) pages.

3.2 COMPANY INFORMATION

For convenience, the information required in this Section 3.2 may be submitted in the form attached in Annex 6 hereto.

3.2.1 Company Profile

Provide the information listed below relative to the Offeror's firm. If the Offeror is proposing to subcontract some of the proposed work to another firm(s), the information requested in sections 3.2.5 and 3.2.6 below must be provided for each subcontractor.

1. Name of firm and business address (street address only), including telephone and fax numbers.

2. Year established (include predecessor companies and year(s) established, if appropriate).

3. Type of ownership (e.g. public, private or closely held).

4. If private or closely held company, provide list of shareholders and the percentage of their ownership.

5. List of directors and principal officers (President, Chief Executive Officer, Vice-President(s), Secretary and Treasurer; provide full names including first, middle and last). Please place an asterisk (*) next to the names of those principal officers who will be involved in the Feasibility Study.

6. If Offeror is a subsidiary, indicate if Offeror is a wholly-owned or partially-owned subsidiary. Provide the information requested in items 1 through 5 above for the Offeror's parent(s).

7. Project Manager's name, address, telephone number, e-mail address and fax number.

3.2.2 Offeror's Authorized Negotiator

Provide name, title, address, telephone number, e-mail address and fax number of the Offeror's authorized negotiator. The person cited shall be empowered to make binding commitments for the Offeror and its subcontractors, if any.

3.2.3 Negotiation Prerequisites

1. Discuss any current or anticipated commitments which may impact the ability of the Offeror or its subcontractors to complete the Feasibility Study as proposed and reflect such impact within the project schedule.

2. Identify any specific information which is needed from the Grantee before commencing contract negotiations.

3.2.4 Offeror's Representations

If any of the following representations cannot be made, or if there are exceptions, the Offeror must provide an explanation.

1. Offeror is a corporation *[insert applicable type of entity if not a corporation]* duly organized, validly existing and in good standing under the laws of the State of _____. The Offeror has all the requisite corporate power and authority to conduct its business as presently conducted, to submit this proposal, and if selected, to execute and deliver a contract to the Grantee for the performance of the Feasibility Study. The Offeror is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment, or ineligible for the award of contracts by any federal or state governmental agency or authority.

2. The Offeror has included, with this proposal, a certified copy of its Articles of Incorporation, and a certificate of good standing issued within one month of the date of its proposal by the State of _____. The Offeror commits to notify USTDA and the Grantee if they become aware of any change in their status in the state in which they are incorporated. USTDA retains the right to request an updated certificate of good standing.

3. Neither the Offeror nor any of its principal officers have, within the three-year period preceding this RFP, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.

4. Neither the Offeror, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 3 above.

5. There are no federal or state tax liens pending against the assets, property or business of the Offeror. The Offeror, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds $3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.

6. The Offeror has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The Offeror has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

The selected Offeror shall notify the Grantee and USTDA if any of the representations included in its proposal are no longer true and correct at the time of its entry into a contract with the Grantee.

3.2.5 Subcontractor Profile

1. Name of firm and business address (street address only), including telephone and fax numbers.

2. Year established (include predecessor companies and year(s) established, if appropriate).

3.2.6 Subcontractor's Representations

If any of the following representations cannot be made, or if there are exceptions, the Subcontractor must provide an explanation.

1. Subcontractor is a corporation *[insert applicable type of entity if not a corporation]* duly organized, validly existing and in good standing under the laws of the State of _____. The subcontractor has all the requisite corporate power and authority to conduct its business as presently conducted, to participate in this proposal, and if the Offeror is selected, to execute and deliver a subcontract to the Offeror for the performance of the Feasibility Study and to perform the Feasibility Study. The subcontractor is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment or ineligible for the award of contracts by any federal or state governmental agency or authority.

2. Neither the subcontractor nor any of its principal officers have, within the three-year period preceding this RFP, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.

3. Neither the subcontractor, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 2 above.

4. There are no federal or state tax liens pending against the assets, property or business of the subcontractor. The subcontractor, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds $3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.

5. The subcontractor has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The subcontractor has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

The selected subcontractor shall notify the Offeror, Grantee and USTDA if any of the representations included in this proposal are no longer true and correct at the time of the Offeror's entry into a contract with the Grantee.

3.3 ORGANIZATIONAL STRUCTURE, MANAGEMENT, AND KEY PERSONNEL

Describe the Offeror's proposed project organizational structure. Discuss how the project will be managed including the principal and key staff assignments for this Feasibility Study. Identify the Project Manager who will be the individual responsible for this project. The Project Manager shall have the responsibility and authority to act on behalf of the Offeror in all matters related to the Feasibility Study.

Provide a listing of personnel (including subcontractors) to be engaged in the project, including both U.S. and local subcontractors, with the following information for key staff: position in the project; pertinent experience, curriculum vitae; other relevant information. If subcontractors are to be used, the Offeror shall describe the organizational relationship, if any, between the Offeror and the subcontractor.

A manpower schedule and the level of effort for the project period, by activities and tasks, as detailed under the Technical Approach and Work Plan shall be submitted. A statement confirming the availability of the proposed project manager and key staff over the duration of the project must be included in the proposal.

3.4 TECHNICAL APPROACH AND WORK PLAN

Describe in detail the proposed Technical Approach and Work Plan (the "Work Plan"). Discuss the Offeror's methodology for completing the project requirements. Include a brief narrative of the Offeror's methodology for completing the tasks within each activity series. Begin with the information gathering phase and continue through delivery and approval of all required reports.

Prepare a detailed schedule of performance that describes all activities and tasks within the Work Plan, including periodic reporting or review points, incremental delivery dates, and other project milestones.

Based on the Work Plan, and previous project experience, describe any support that the Offeror will require from the Grantee. Detail the amount of staff time required by the Grantee or other participating agencies and any work space or facilities needed to complete the Feasibility Study.

3.5 EXPERIENCE AND QUALIFICATIONS

Provide a discussion of the Offeror's experience and qualifications that are relevant to the objectives and TOR for the Feasibility Study. If a subcontractor(s) is being used, similar information must be provided for the prime and each subcontractor firm proposed for the project. The Offeror shall provide information with respect to relevant experience and qualifications of key staff proposed. The Offeror shall include letters of commitment from the individuals proposed confirming their availability for contract performance.

As many as possible but not more than six (6) relevant and verifiable project references must be provided for each of the Offeror and any subcontractor, including the following information:

Project name,
Name and address of client (indicate if joint venture),
Client contact person (name/ position/ current phone, fax numbers and E-Mail),
Period of Contract,
Description of services provided,
Dollar amount of Contract, and
Status and comments.

Offerors are strongly encouraged to include in their experience summary primarily those projects that are similar to or larger in scope than the Feasibility Study as described in this RFP.

Section 4: AWARD CRITERIA

Individual proposals will be initially evaluated by a Procurement Selection Committee of representatives from the Grantee. The Committee will then conduct a final evaluation and completion of ranking of qualified Offerors. The Grantee will notify USTDA of the best qualified Offeror, and upon receipt of USTDA's no-objection letter, the Grantee shall promptly notify all Offerors of the award and negotiate a contract with the best qualified Offeror. If a satisfactory contract cannot be negotiated with the best qualified Offeror, negotiations will be formally terminated. Negotiations may then be undertaken with the second most qualified Offeror and so forth.

The selection of the Contractor will be based on the following criteria:

The prime contractor for this project will be a U.S. company competitively selected by NEA. The company and its employees assigned to the project must be familiar with current DE-CCHP policies, regulations, and development efforts in the United States and China. In addition, demonstrated expertise and experience in the following specific areas is suggested:

- Technologies used in DE-CCHP plants.
- Design, optimization, operation, and management of DE-CCHP systems.
- DE-CCHP connection to electric power and thermal grids.
- Feasibility studies.
- Chinese language.

Proposals will be evaluated using the following criteria (a point system is used to weigh the relative importance of each factor):

- Technical approach to performing the tasks in Section 2.1.11, Terms of Reference (50 points)
  - Project Performance Measurement (2 points)
  - Model Projects Identification (5 points)
  - Technical Assessments (10 points)
  - Economic Analyses (10 points)
  - Financial Analyses (5 points)
  - Environmental Analyses (3 points)
  - Policy and Regulatory Review (10 points)
  - Host Country Development Impacts Analyses (3 points)
  - U.S. Supplier Analysis (2 points)
- Expertise of personnel in the areas identified above (40 points)
  - Current U.S./China DE-CCHP policies, regulations, and development efforts (10 points)
  - Technologies used in DE-CCHP plants (10 points)
  - Design, optimization, operation, and management of DE-CCHP systems (5 points)
  - DE-CCHP connection to electric power and thermal grids (5 points)
  - Feasibility studies (5 points)

- Chinese language (5 points)

- Demonstrated Experience and Past Performance (10 points)

  - Three (3) project references for contracts of a similar nature (5 points)
  - Projects in China (3 points)
  - Resumes of key personnel (2 points)

Proposals that do not include all requested information may be considered non-responsive.

Price will not be a factor in contractor selection.

ANNEX 1

Ms. Wang Jing
Deputy Director
Division of Oil and Natural Gas, Department of Oil and Natural Gas
National Energy Administration (NEA)
No. 38 S. Yuetan Street
Beijing 100824
People's Republic of China

Phone: 8610-6850-1603
Fax: 8610-6850-2074
E-mail: wangj@ndrc.gov.cn

Activity No. 2010-31042A: Distributed Energy Combined Cooling, Heat and Power Tri-generation Model Projects

POC: Nina Patel, USTDA, 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901, Tel: (703) 875-4357, Fax: (703) 875-4009.
Distributed Energy Combined Cooling, Heat and Power Tri-generation Model Projects. The Grantee invites submission of qualifications and proposal data (collectively referred to as the "Proposal") from interested U.S. firms that are qualified on the basis of experience and capability to develop a feasibility study for to implement a Natural Gas Tri-Generation Model Projects feasibility study (FS) for the National Energy Administration (NEA). The FS will include a technical, economic, and financial assessment of implementing distributed energy combined cooling, heat and power tri-generation (also known as distributed energy combined heat and power (DE-CCHP)) technology in two Model facilities.

China is implementing a much larger National Distributed Energy Combined Cooling, Heat and Power Tri-generation Model Projects Program conducted by the National Energy Administration (NEA).The main purpose is to use DE-CCHP to replace existing partial conventional energy. The U.S.-China Energy Cooperation Program (ECP) will participate in DE-CCHP Project. The Project will be funded by USTDA and two model projects will be examined in the study.

Project Description

China faces enormous challenges as it strives to meet the energy needs of its growing economy. Increasing the energy efficiency of both power and heat generation lies foremost amongst these challenges. Utilization of distributed energy and combined cooling, heat and power tri-generation (DE-CCHP) represents a highly efficient technology solution to help meet China's energy and environmental goals. On average, DE-CCHP systems, which use waste heat from electricity generation for heating, humidity control, air conditioning and a range of thermal energy needs, are more efficient

than conventional power generation systems.

China is planning investments in DE-CCHP technology on an impressive scale. Under China's *CHP Development Planning and 2020 Development Goal*, the total installed capacity of DE-CCHP in China will reach 200 GW by 2020. This represents a significant increase in capacity from the Ministry of Power's most recent estimate of CHP capacity in 2005. By the year 2020, China expects new DE-CCHP installations to generate energy savings of 30 million tons of coal equivalent (tce), 13 million tons of CO_2, and 0.6 million tons of SO_2 reduced annually, compared to the separate production of heat and power.

China's plans to dramatically increase its DE-CCHP capacity represent opportunities for U.S. companies who are industry leaders in DE-CCHP. Many of the most recent and highly technical DE-CCHP solutions are not yet available in China. U.S. company interests in pursuing the resulting demand for DE-CCHP technologies and services have been demonstrated in part through the formation of the ECP's Distributed Energy and Combined Heat and Power Working Group and its member companies' active pursuit of DE-CCHP opportunities in China. The ECP DE-CCHP working group represents a range of U.S. companies, including General Electric, Caterpillar, United Technologies, Capstone, AECOM and others.

In consultation with the Decentralized Power Generation and Combined Cooling, Heat and Power Working Group of the ECP, the U.S. feasibility study is to provide NEA and the relevant facilities with technical assessments and recommendations. It will involve market and economic conditions. Each Model project will produce between 0.5 and 50 MW of electric power from a single unit. The two model projects, one commercial and one industrial application funded by USTDA, will be examined in the study. The commercial project will most likely be a hotel, or large retail store, and is estimated to require 2 MW of power costing around $5 million. The industrial project will be much larger in size, and require around 40 MW of power, costing around $45 million. The U.S. technologies are optional scheme of the model projects, and would be for applications and at facilities selected in cooperation with the DE-CCHP working group.

This feasibility study is to provide NEA and the selected facilities with technical assessments and recommendations for site system setup and alignment with the existent grid infrastructure. Analysis of the selected sites, relevant regulatory policies, and market and economic conditions would also be performed. The results of the study will be used to analyses the further and more rapid development obstacles of DE-CCHP in China, suggest strategies, and implement the model projects in alignment with NEA's goals.

DE-CCHP will allow China to produce power and thermal energy more reliably by reducing dependence on central coal-fired power plants. DE-CCHP also provides China with significant opportunities to improve energy efficiency and reduce greenhouse gas emissions from industrial, commercial, and institutional energy consumers. In addition, DE-CCHP will facilitate energy diversification by utilizing China's increased access to natural gas and vast renewable resources, and exploiting waste heat and waste gas

opportunities from heavy industries. Finally, DE-CCHP will offer a practical approach to improving China's district heating infrastructure by providing an energy efficient heat supply.

About the Grantee:

The National Energy Administration (NEA) of China is the government agency responsible for formulating and implementing energy development plans and industrial policies; promoting institutional reform in the energy sector; administering sectors including coal, oil, natural gas, power, new and renewable energy; guiding scientific and technological advancement; organizing and carrying out the research of important equipment and guiding the assimilation of imported equipment; organizing and coordinating key energy-related Model projects and promoting the deployment of new products, technologies and equipments, as well as other energy-related responsibilities. The NEA reports to the National Development and Reform Commission.

About the Required Subcontractor

China's National Energy Administration (NEA) selected Beijing Huajian Power Design and Research Institute (BHJ), based in Beijing, China, to act as a subcontractor under Task 2 of this project. BHJ is a wholly owned subsidiary of the State Power Economic Research Institute, a think-tank under the electricity research and engineering design advisory body of the State Grid Corporation of China. BHJ has provided technical support to the Chinese government for key national DE-CCHP studies since 2004 that have generated policy recommendations for China's energy regulatory bodies, and is currently conducting research on distributed energy development for NEA. The State Power Economic Research Institute's research focus includes grid and power sector planning, engineering design, energy and environmental protection, power supply and demand analysis, institutional reform and energy tariffs and auditing. The State Grid Corporation of China is the largest electric power and transmission distribution company in the world. Established in 2002, the State Grid Corporation has 1.5 million employees and delivers power to 128 million customers. BHJ contact information is as follows:

Wang Xin Lei
Director, Senior Engineer
Beijing Huajian Power Design and Research Institute (BHJ)
No. 8 Nanheng East Street
Beijing 100052
Peoples' Republic of China
wangxinlei@chinasperi.sgcc.com.cn

The TOR for this project includes the following summarized tasks:

Task 1: Project Performance Measurement
Task 2: Model Projects Identification

Task 3: Technical Assessments
Task 4: Economic Analyses
Task 5: Financial Analyses
Task 6: Environmental Analyses
Task 7: Policy and Regulatory Review
Task 8: Host Country Development Impacts Analyses
Task 9: U.S. Supplier Analysis
Task 10: U.S. Experience in Tri-Cogeneration
Task 11: Final Report

The U.S. firm selected will be paid in U.S. dollars from a $465,482 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).

A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the Terms of Reference, and a background definitional mission/desk study report are available from USTDA, at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901. To request the RFP in PDF format, please go to: https://www.ustda.gov/businessopps/rfpform.asp. Requests for a mailed hardcopy version of the RFP may also be faxed to the IRC, USTDA at 703-875-4009. In the fax, please include your firm's name, contact person, address, and telephone number. Some firms have found that RFP materials sent by U.S. mail do not reach them in time for preparation of an adequate response. Firms that want USTDA to use an overnight delivery service should include the name of the delivery service and your firm's account number in the request for the RFP. Firms that want to send a courier to USTDA to retrieve the RFP should allow one hour after faxing the request to USTDA before scheduling a pick-up. Please note that no telephone requests for the RFP will be honored. Please check your internal fax verification receipt. Because of the large number of RFP requests, USTDA cannot respond to requests for fax verification. Requests for RFPs received before 4:00 PM will be mailed the same day. Requests received after 4:00 PM will be mailed the following day. Please check with your courier and/or mail room before calling USTDA.

Only U.S. firms and individuals may bid on this USTDA financed activity. Interested firms, their subcontractors and employees of all participants must qualify under USTDA's nationality requirements as of the due date for submission of qualifications and proposals and, if selected to carry out the USTDA-financed activity, must continue to meet such requirements throughout the duration of the USTDA-financed activity. All goods and services to be provided by the selected firm shall have their nationality, source and origin in the U.S. or host country. The U.S. firm may use subcontractors from the host country for up to 20 percent of the USTDA grant amount. Details of USTDA's nationality requirements and mandatory contract clauses are also included in the RFP.

Interested U.S. firms should submit their Proposal in English and Chinese directly to the Grantee by 12:00 PM (noon), October 18, 2010 at the above address. Evaluation criteria for the Proposal are included in the RFP. Price will not be a factor in contractor selection, and therefore, cost proposals should NOT be submitted. The Grantee reserves

the right to reject any and/or all Proposals. The Grantee also reserves the right to contract with the selected firm for subsequent work related to the project. The Grantee is not bound to pay for any costs associated with the preparation and submission of Proposals.

ANNEX 2

Definitional Mission Report

2.1 Feasibility Study: Distributed Energy Combined Cooling, Heat and Power Tri-generation Model Projects

2.1.1 Description

Distributed Energy Combined Cooling, Heat and Power Tri-generation Model Projects (DE-CCHP) refers to generating electricity at or near the place where it is used. The waste heat from the electricity generation can be used for space heating, water heating, process steam for industrial steam loads, humidity control, air conditioning, water cooling, product drying, or for nearly any other thermal energy need. The end result is significantly more efficient than generating each of these separately. For example, the average power plant is thirty-three percent efficient and the average overall efficiency of generating electricity and heat by conventional systems is around fifty-one percent. DE-CCHP plants are often more than eighty percent efficient.

DE-CCHP systems come in a range of sizes, from household-scale and up, but they are most feasible in larger commercial buildings, multi-building facilities such as colleges and universities, and industries. A DE-CCHP system consists of a prime mover, an electric power generator, and a heat exchanger to recover waste heat. Prime movers may include reciprocating engines, gas turbines, microturbines, fuel cells, or Stirling engines. For heating applications, the waste heat can be used to produce steam in a boiler or hot water in a hot water heater. For cooling and air conditioning applications, the waste heat can be used in an absorption chiller, adsorption chiller, steam chiller, or a desiccant dehumidifier.

DE-CCHP plants are typically fueled by natural gas. They can also run on biogas produced from landfills, wastewater treatment plants, concentrated livestock operations, food and beverage processing waste, or other organic products, making DE-CCHP a renewable energy source. In addition, they can operate on propane, diesel, or most other liquid or gaseous fossil fuels.

Although DE-CCHP technologies are still largely confined to niche markets in China (e.g., emergency, remote, and backup power), they have great potential for broad industrial, commercial, and institutional application. According to the International Energy Agency, DE-CCHP units are starting to play an important role in China's energy market. In 2003, there were 1,859 DE-CCHP units under fifty megawatts which accounted for eighty-eight percent of all combined heat and power units and forty-eight percent of the power produced using combined heat and power.[1]

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[1] Kerr, T., *CHP and DHC in China: An Assessment of Market and Policy Potential*, International Energy Agency, The International CHP/DHC Collaborative, Paris, France, November 2008.

Each fifty gigawatt addition of new DE-CCHP would result in annual energy savings of about forty million tons of coal equivalent. Furthermore, if thirty percent of existing industrial boilers and twenty percent of residential district heating boilers were retrofitted to DE-CCHP, annual energy savings of about twenty million tons of coal equivalent could be achieved.

However, the development of customer-based DE-CCHP in China is encountering both technical and commercial barriers that are rooted in the country's current regulatory policies on greenhouse gas emission reduction, energy conservation, natural gas price, and tax credit for high efficient systems to grid connections. For example, there are insufficient technical standards and no clear permitting process for interconnecting DE-CCHP to the electric and thermal grids.

The USTDA grant will fund two feasibility studies. One study will focus on an industrial DE-CCHP Model project and the other will focus on a commercial DE-CCHP Model project.

2.1.2 Project Sponsor's Capabilities and Commitment

The National Energy Administration (NEA) of China is the government agency responsible for formulating and implementing energy development plans and industrial policies; promoting institutional reform in the energy sector; administering sectors including coal, oil, natural gas, power, new and renewable energy; guiding scientific and technological advancement; organizing and carrying out the research of important equipment and guiding the assimilation of imported equipment; organizing and coordinating key energy-related Model projects and promoting the deployment of new products, technologies and equipments, as well as other energy-related responsibilities. The NEA reports to the National Development and Reform Commission.

2.1.3 Implementation Financing

The Chinese government is establishing a national model program to encourage the development of DE-CCHP, to determine the level of funding needed for broad DE-CCHP deployment in China, and to establish the appropriate tax credit. Under the program, one thousand plants will be built, each producing up to fifty megawatts of electric power from a single unit. The NEA wants to be certain that funding of DE-CCHP projects in China is done effectively. It does not want to subsidize DE-CCHP if the end-use market is not ready for the technology.

For these Model projects, equipment sourced in the United States likely will be financed through the Export-Import Bank of China's on-lending program with the Export-Import Bank of the United Stat es. Under this arrangement, provincial finance, and development and reform authorities would examine and approve the Model project proposals, feasibility studies, and loan applications. The Ministry of Finance would designate the Chinese Ex-Im Bank to provide on-lending services.

In addition, funding from the municipal or provincial governments may be available depending on the scopes of the Model projects. Financing also may be provided directly to the Model project owners from commercial banks in the form of loans, or from multilateral development banks, such as the World Bank or the Asian Development Bank, in the form of loans or loan guarantees.

2.1.4 U.S. Export Potential

The scopes of these Model projects have yet to be defined. Their capacities could range from two hundred fifty kilowatts to fifty megawatts with values of $600,000 to $65 million. Their configurations may use gas turbines or reciprocating engines to drive electric generators followed by heat recovery steam generators supplying steam turbines to drive other electric generators or absorption chillers. They may also include steam boilers followed by extraction turbines driving electric generators and mechanical turbines driving refrigeration systems. Heat could also be recovered to produce hot water for domestic use or for central heating. Furthermore, the equipment for each Model project could be supplied as a fully integrated package from a single manufacturer or by combining disparate technologies from multiple suppliers.

Because there are many possible capacity, technology, and application scenarios, it is difficult to suggest typical DE-CCHP installations to characterize the Model projects or establish their budgets. Moreover, the competing interests of the ECP DE-CCHP working group members require a technology neutral approach to describing the Model projects. Producing sample budgets based on particular capacities and technologies may unfairly bias the Model project selection process in favor of particular suppliers.

The U.S. Environmental Protection Agency, Combined Heat and Power Program has studied the installed costs for various DE-CCHP technologies and presented the following conclusions. The total installed cost for typical gas turbines (5 – 40 MW) ranges from $970/kW to $1,300/kW, while total installed costs for typical microturbines in grid-interconnected DE-CCHP applications may range anywhere from $2,400/kW to $3,000/kW. Commercially available natural gas spark-ignited engine generator sets have total installed costs of $1,100/kW to $2,200/kW, and steam turbines have total installed costs ranging from $350/kW to $700/kW. Fuel cells are currently the most expensive among the five DE-CCHP technologies with total installed costs ranging between $5,000 and $6,500/kW.[2] Based on these figures, it is estimated that an industrial DE-CCHP project producing forty megawatts of power would cost approximately $45 million. A commercial DE-CCHP project producing two megawatts of power would cost about $5.4 million.

Equipment and services representing eighty percent of the project costs could be sourced in the United States.

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[2] U.S. Environmental Protection Agency, Combined Heat and Power Partnership, *Catalog of CHP Technologies*, December 2008.

Table 2.1.1: Sample List of U.S. Suppliers of DE-CCHP Products and Services

Goods and Services	U.S. Suppliers
Reciprocating Engines	Caterpillar, Cummins, Dresser Waukesha, General Electric (Jenbacher)
Gas Turbines	Caterpillar (Solar Turbines), General Electric, United Technologies (Pratt and Whitney)
Steam Turbines	Dresser-Rand, General Electric
Microturbines	Capstone, Ingersoll Rand
Fuel Cells	Fuel Cell Energy, United Technologies
Heat Recovery Steam Generators	G.C. Broach, General Electric, Nooter/Erikson, Victory Energy
Chillers	Ingersoll Rand (Trane), Johnson Controls (York), United Technologies (Carrier)
Consulting Services	AECOM, Burns and McDonnell, EXERGY Partners, Gas Technology Institute, General Electric, Honeywell, IBM, ICF International, Johnson Controls, NORESCO, Vanderweil Power Group

A broader view of the potential commercial opportunities for U.S. manufacturers can be gleaned from the Chinese DE-CCHP market size. The market for DE-CCHP in China is estimated to be between ten and twenty gigawatts, or $10 billion to $20 billion, over the next three to five years. U.S. companies are world leaders in the supply of components used in DE-CCHP plants. These components include reciprocating engines, gas turbines, steam turbines, microturbines, fuel cells, heat recovery steam generators, electric generators, chillers, and energy consulting services. None of the ECP DE-CCHP working group members responded to a request for estimates of the market potentials for their specific products in China.

2.1.5 Foreign Competition and Market Entry Issues

The market for DE-CCHP equipment in China has become increasingly competitive. The high demand for electricity has attracted many suppliers to the Chinese market. In addition to traditional international suppliers from the United States, Japan, South Korea, and Europe, there are a growing number of companies from China. Representatives from the NEA recently visited Europe to study DE-CCHP development because the NEA considers Europe to be the leader in natural gas utilization technologies including DE-CCHP.

U.S. manufacturers compete in China against local companies ZhuZhou Nanfang Gas Turbine Packaging and China Aviation Gas Turbine, Hitachi from Japan, and Siemens and Deutz from Germany. In the area of gas turbines, General Electric and Siemens are the industry leaders in China. In the area of reciprocating engines, Caterpillar is the industry leader in China. Furthermore, China is the home of Broad Air Conditioning, one of the world's largest manufacturers of absorption chillers used in DE-CCHP systems.

The Chinese market presents many challenges to foreign companies wishing to sell products there. More recently, the Chinese government posted notice of a new Chinese rule implementing the "Indigenous Innovation Product Accreditation Program." The program requires vendors to gain accreditation for their products before they can be included in a government procurement catalog of products containing "indigenous innovation." Companies that are not listed can sell their products to the government, but preference will go to those listed in the catalog. The catalog covers six product categories: software, computer and application devices, telecommunication products, new energy and equipment, highly energy-efficient products, and modern office equipment.[3]

The new energy and equipment category includes gas turbine/steam turbine combined-cycle power generation sets, fuel cell power generators, methane centralized gas supply systems, and internal combustion engines for power generation using methane. These technologies are central to DE-CCHP plants. In order to qualify for inclusion in the government procurement catalog, a product must, among other requirements, contain Chinese proprietary intellectual property rights whose ownership is clearly defined. Since much of this technology is not available in China, the indigenous innovation accreditation program should not have a negative impact on U.S. products in the near term.

2.1.6 Developmental Impact

Infrastructure

The two feasibility studies will identify technical barriers to interconnection with the electric power transmission and thermal grids and recommend policies, market structure, and best practices that will promote the widespread deployment of DE-CCHP technologies in all sectors of the Chinese economy. The results of the feasibility studies will be used to develop two DE-CCHP Model projects in China. Implementation of the Model projects will lay the groundwork for expanded deployment of DE-CCHP aimed at improving the reliability, security, and efficiency of China's electric power and thermal energy supply systems.

Market-Oriented Reform

China's power market was first opened to private investment in 1985 with the passing of the "Provisional Regulations on Encouraging Fund Raising for Power Construction and Introducing Multi-Rate Power Tariff." Further reforms were initiated in 1997 with the dismantling of the Ministry of Electric Power and the establishment of the State Power Corporation. In 2002, the Chinese government broke up the State Power Corporation into five separate generation companies, two regional transmission grid operators, and several services units.

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[3] Chao, Loretta. "China's Curbs on Tech Purchases Draw Ire." *The Wall Street Journal* 11 December 2009: A11. Print.

The five state-owned power generation companies produce about half of China's electricity. Most of the remainder is generated by independent power producers. Ongoing reforms aim to separate power plants from power-supply networks, privatize a significant amount of state-owned property, encourage competition, and revamp pricing mechanisms. DE-CCHP may help to accelerate slow-moving reforms in the electric power sector by making the electricity delivery system more accessible to independent power producers.

Human Capacity Building

Since many DE-CCHP technologies are not available in China, the development of human capacity is essential to the long-term viability of the market. These Model projects will involve training for management, engineering staff, operations personnel, and maintenance personnel. Local tradesmen such as electricians, pipe fitters, and welders will be employed to construct the facilities and 2 – 3 permanent jobs will be created to operate and maintain the commercial Model project and as many as ten permanent jobs will be created for the industrial Model project. If one thousand such projects are built in China over the next five years, six thousand permanent jobs will be created.

Furthermore, the Model projects will provide policy-makers with information on new energy technologies; energy policy such as regulation, investment incentives, and taxes to encourage market development; market structure for a power sector with many small competitors; and best practices being employed throughout the world.

Technology Transfer and Productivity Improvements

These Model projects will employ cutting edge technologies such as reciprocating engines, gas turbines, steam turbines, microturbines, fuel cells, heat recovery steam generators, electric generators, and chillers. By combining these disparate technologies, electricity will be generated at or near the place where it is used resulting in increased reliability and decreased transmission losses and the waste heat will be recycled resulting in increased energy efficiency.

2.1.7 Environmental Impact

DE-CCHP is significantly more efficient than combining electricity from the transmission grid with a separate boiler and air conditioner. This means less fossil fuel use, fewer greenhouse gas emissions, and fewer smog-forming emissions. Conventional systems that generate electricity and thermal energy separately require more energy input than integrated DE-CCHP systems. Because of its higher efficiency, DE-CCHP produces less carbon dioxide emissions than conventional centralized power plants. Furthermore, with less fuel burned, fewer criteria air pollutants are produced. Moreover, DE-CCHP provides an opportunity to use free, renewable waste fuels from landfills, wastewater treatment plants, livestock operations, and food and beverage processing plants.

2.1.8 U.S. Labor Impact

These Model projects will not provide any financial incentive to any business enterprise currently located in the United States to relocate outside the United States. Conversely, these projects are expected to open up trade opportunities for U.S.-based companies to export their goods and services to the host country, thus increasing the number of jobs for U.S. workers. Furthermore, these projects will not contribute to the violation of internationally recognized worker's rights.

2.1.9 Qualifications

The prime contractor for this project will be a U.S. company competitively selected by the project sponsor. The company and its employees assigned to the project must be familiar with current DE-CCHP policies, regulations, and development efforts in the United States and China. In addition, demonstrated expertise and experience in the following specific areas is suggested:

- Technologies used in DE-CCHP plants.
- Design, optimization, operation, and management of DE-CCHP systems.
- DE-CCHP connection to electric power and thermal grids.
- Feasibility studies.
- Chinese language.

Proposals will be evaluated using the following criteria (a point system is used to weigh the relative importance of each factor):

- Technical approach to performing the tasks in Section 2.1.11, Terms of Reference (50 points)
  - Project Performance Measurement (2 points)
  - Model Projects Identification (5 points)
  - Technical Assessments (10 points)
  - Economic Analyses (10 points)
  - Financial Analyses (5 points)
  - Environmental Analyses (3 points)
  - Policy and Regulatory Review (10 points)
  - Host Country Development Impacts Analyses (3 points)
  - U.S. Supplier Analysis (2 points)

- Expertise of personnel in the areas identified above (40 points)
  - Current U.S./China DE-CCHP policies, regulations, and development efforts (10 points)
  - Technologies used in DE-CCHP plants (10 points)
  - Design, optimization, operation, and management of DE-CCHP systems (5 points)

- DE-CCHP connection to electric power and thermal grids (5 points)
- Feasibility studies (5 points)
- Chinese language (5 points)

- Demonstrated Experience and Past Performance (10 points)

  - Three (3) project references for contracts of a similar nature (5 points)
  - Projects in China (3 points)
  - Resumes of key personnel (2 points)

2.1.10 Justification

DE-CCHP will allow China to produce power and thermal energy more reliably by reducing dependence on central coal-fired power plants. DE-CCHP also provides China with significant opportunities to improve energy efficiency and reduce greenhouse gas emissions from industrial, commercial, and institutional energy consumers. In addition, DE-CCHP will facilitate energy diversification by utilizing China's increased access to natural gas and vast renewable resources, and exploiting waste heat and waste gas opportunities from heavy industries. Finally, DE-CCHP will offer a practical approach to improving China's district heating infrastructure by providing an energy efficient heat supply.

However, there are a number of technical and financial barriers restricting the broad deployment of DE-CCHP in China. In order to address these issues, the NEA is setting up one thousand Model projects under a national pilot program. The ECP DE-CCHP working group has requested USTDA funding to identify two Model projects that fit China's national DE-CCHP program and to study their feasibilities. These Model projects will produce up to fifty megawatts of electric power from a single unit, identify technical and financial barriers, and suggest new policies and regulations.

China is committed to developing DE-CCHP capacity as demonstrated by the scale of its national pilot program. Furthermore, the development of DE-CCHP in China will provide opportunities for the sale of U.S. goods and services as demonstrated by the NEA's willingness to collaborate with the ECP. Moreover, these Model projects likely will lead to significant follow-on commercial opportunities for U.S. companies as China's DE-CCHP market develops.

2.1.12 Study Budget

Line Item Budget

Table 2.1.2: Project Cost Estimate

DIRECT LABOR COSTS:				
Task	**Resource**	**Man-Days**	**Daily Rate ($)**	**Total Cost ($)**
1	Project Manager	5	1,076.00	5,380.00
2	Project Manager	30	1,076.00	32,280.00

	Financial Analyst	30	1,016.00	30,480.00
3	Project Manager	30	1,076.00	32,280.00
	Principal Engineer	40	1,042.00	41,680.00
	Associate Engineer	40	592.00	23,680.00
4	Project Manager	20	1,076.00	21,520.00
	Financial Analyst	20	1,016.00	20,320.00
5	Project Manager	20	1,076.00	21,520.00
	Financial Analyst	20	1,016.00	20,320.00
6	Project Manager	20	1,076.00	21,520.00
	Environmental Engineer	30	831.00	24,930.00
7	Project Manager	30	1,076.00	32,280.00
	Policy and Regulatory Experts	35	1,016.00	35,560.00
8	Project Manager	10	1,076.00	10,760.00
	Associate Engineer	15	592.00	8,880.00
9	Project Manager	5	1,076.00	5,380.00
	Associate Engineer	15	592.00	8,880.00
10	Project Manager	5	1,076.00	5,380.00
Total Direct Labor Costs (DL)		**420**		**403,030.00**
OTHER DIRECT COSTS:				
Description		**Quantity**	**Unit Cost**	**Total Cost ($)**
Purchased Services				
Document Translation		150 pages	$40.00	6,000.00
Travel				
International Air Travel		5 trips	$2,000.00	10,000.00
Per Diem		125 days	$300.00	37,500.00
Ground Transportation		5 trips	$200.00	1,000.00
Communication		125 days	$20.00	2,500.00
DBA Insurance		$124,525 DL	$3.35/$100 DL	4,171.59
Medevac Insurance		5 trips	$96.00	480.00
Other				
Reproduction and Binding		20 documents	$10.00	200.00
Courier Services		20 documents	$30.00	600.00
Total Other Direct Costs (ODC)				**62,451.59**
COST SUMMARY				
Total Costs (DL + ODC)				**465,481.59**

Task Completion Schedule

Figure 2.1.1: Task Completion Schedule

	Month					
Task	**1**	**2**	**3**	**4**	**5**	**6**
1						
2						
3						
4						

5							
6							
7							
8							
9							
10							

Budget Narrative

The base salaries for the technical disciplines were obtained from data published by the U.S. Bureau of Labor Statistics for earners in the ninetieth percentile to account for the unique expertise needed to perform work in China. An additional fifteen percent was added to those disciplines which require advanced degrees or more than ten years of work experience. For disciplines in support roles, base salaries were based on data for earners in the fiftieth percentile.

Resources

Project Manager – This individual will provide guidance, support, and oversight to ensure accurate and timely completion of the tasks under the terms of reference. The individual should have at least a bachelor's degree in engineering and fifteen years of experience with the operation and management of DE-CCHP systems. Also, the individual should have relevant science, policy, market, and technology analysis experience. The fully loaded labor rate of $1,076 was calculated using a base salary of $575 per day plus twenty percent for benefits, thirty percent for overhead, general, and administrative costs, and twenty percent for profit.

Principal Engineer – This individual will provide advice and counsel in support of the subtasks under Task 3 in the terms of reference. The individual should have at least a bachelor's degree in mechanical or electrical engineering and fifteen years of experience with the design of DE-CCHP systems. The fully loaded labor rate of $1,042 was calculated using a base salary of $556 per day plus twenty percent for benefits, thirty percent for overhead, general, and administrative costs, and twenty percent for profit.

Financial Analyst – This individual will provide advice and counsel in support of the subtasks under Tasks 4 and 5 in the terms of reference. The individual should have at least a bachelor's degree in finance, business administration, or economics and ten years of experience evaluating project economics and arranging financing for energy sector projects. The fully loaded labor rate of $1,016 was calculated using a base salary of $543 per day plus twenty percent for benefits, thirty percent for overhead, general, and administrative costs, and twenty percent for profit.

Environmental Engineer – This individual will provide advice and counsel in support of the subtasks under Task 6 in the terms of reference. The individual should have at least a bachelor's degree in civil, chemical, or environmental engineering and ten years of experience preparing environmental impact assessments on energy sector projects that

meet Chinese and multinational development bank requirements. The fully loaded labor rate of $831 was calculated using a base salary of $444 per day plus twenty percent for benefits, thirty percent for overhead, general, and administrative costs, and twenty percent for profit.

Policy and Regulatory Expert – This individual will provide advice and counsel in support of the subtasks under Task 7 in the terms of reference. The individual should have at least a bachelor's degree in public administration, political science, or a related field and ten years of experience in energy efficiency policy, energy sector market analysis, and energy sector regulations. The fully loaded labor rate of $1,016 was calculated using a base salary of $543 per day plus twenty percent for benefits, thirty percent for overhead, general, and administrative costs, and twenty percent for profit.

Associate Engineers – These individuals will support the individual task experts and perform the detailed work under the terms of reference. Each individual should have at least a bachelor's degree in chemical, mechanical, or electrical engineering and five years of DE-CCHP experience. The fully loaded labor rate of $592 was calculated using a base salary of $316 per day plus twenty percent for benefits, thirty percent for overhead, general, and administrative costs, and twenty percent for profit.

Travel

It is expected that two trips will be made. The first will involve the Project Manager and the Financial Analyst to gather information needed to complete Tasks 1, 2, 4, and 5. The second will involve the Principal Engineer, Environmental Engineer, and Policy and Regulatory Expert to gather information needed to complete Tasks 3, 6, and 7. Per diem living expenses include hotel, meals, and incidentals.

Trip 1: International travel days = 2 travelers/trip x 25 days/traveler x 1 trip = 50 days
Trip 2: International travel days = 3 travelers/trip x 25 days/traveler x 1 trip = 75 days

Defense Base Act (DBA) insurance is based on the contractor's total direct labor cost while traveling internationally ($2,092.00/day x 25 days + $2,889.00/day x 25 = $124,525.00).

ANNEX 3

U.S. TRADE AND DEVELOPMENT AGENCY
Arlington, VA 22209-2131

NATIONALITY, SOURCE, AND ORIGIN REQUIREMENTS

The purpose of USTDA's nationality, source, and origin requirements is to assure the maximum practicable participation of American contractors, technology, equipment and materials in the prefeasibility, feasibility, and implementation stages of a project.

USTDA STANDARD RULE (GRANT AGREEMENT STANDARD LANGUAGE):

Except as USTDA may otherwise agree, each of the following provisions shall apply to the delivery of goods and services funded by USTDA under this Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from host country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for implementation of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to Study support (e.g., local lodging, food, and transportation) in host country are not subject to the above restrictions. USTDA will make available further details concerning these standards of eligibility upon request.

NATIONALITY:

1) Rule

Except as USTDA may otherwise agree, the Contractor for USTDA funded activities must be either a U.S. firm or a U.S. individual. Prime contractors may utilize U.S.

subcontractors without limitation, but the use of host country subcontractors is limited to 20% of the USTDA grant amount.

2) Application

Accordingly, only a U.S. firm or U.S. individual may submit proposals on USTDA funded activities. Although those proposals may include subcontracting arrangements with host country firms or individuals for up to 20% of the USTDA grant amount, they may not include subcontracts with third country entities. U.S. firms submitting proposals must ensure that the professional services funded by the USTDA grant, to the extent not subcontracted to host country entities, are supplied by employees of the firm or employees of U.S. subcontractor firms who are U.S. individuals.

Interested U.S. firms and consultants who submit proposals must meet USTDA nationality requirements as of the due date for the submission of proposals and, if selected, must continue to meet such requirements throughout the duration of the USTDA-financed activity. These nationality provisions apply to whatever portion of the Terms of Reference is funded with the USTDA grant.

3) Definitions

A "U.S. individual" is (a) a U.S. citizen, or (b) a non-U.S. citizen lawfully admitted for permanent residence in the U.S. (a green card holder).

A "U.S. firm" is a privately owned firm which is incorporated in the U.S., with its principal place of business in the U.S., and which is either (a) more than 50% owned by U.S. individuals, or (b) has been incorporated in the U.S. for more than three (3) years prior to the issuance date of the request for proposals; has performed similar services in the U.S. for that three (3) year period; employs U.S. citizens in more than half of its permanent full-time positions in the U.S.; and has the existing capability in the U.S. to perform the work in question.

A partnership, organized in the U.S. with its principal place of business in the U.S., may also qualify as a "U.S. firm" as would a joint venture organized or incorporated in the United States consisting entirely of U.S. firms and/or U.S. individuals.

A nonprofit organization, such as an educational institution, foundation, or association may also qualify as a "U.S. firm" if it is incorporated in the United States and managed by a governing body, a majority of whose members are U.S. individuals.

SOURCE AND ORIGIN:

1) Rule

In addition to the nationality requirement stated above, any goods (e.g., equipment and materials) and services related to their shipment (e.g., international transportation and insurance) funded under the USTDA Grant Agreement must have their source and origin in the United States, unless USTDA otherwise agrees. However, necessary purchases of goods and project support services which are unavailable from a U.S. source (e.g., local food, housing and transportation) are eligible without specific USTDA approval.

2) Application

Accordingly, the prime contractor must be able to demonstrate that all goods and services purchased in the host country to carry out the Terms of Reference for a USTDA Grant Agreement that were not of U.S. source and origin were unavailable in the United States.

3) Definitions

"Source" means the country from which shipment is made.

"Origin" means the place of production, through manufacturing, assembly or otherwise.

Questions regarding these nationality, source and origin requirements may be addressed to the USTDA Office of General Counsel.

ANNEX 4

GRANT AGREEMENT

This Grant Agreement is entered into between the Government of the United States of America, acting through the U.S. Trade and Development Agency ("USTDA") and National Energy Administration ("Grantee"). USTDA agrees to provide the Grantee under the terms of this Agreement US$465,482 ("USTDA Grant") to fund the cost of goods and services required for a feasibility study ("Study") on the proposed Natural Gas Tri-Generation Model Projects ("Project") in the Peoples' Republic of China ("Host Country").

1. USTDA Funding

The funding to be provided under this Grant Agreement shall be used to fund the costs of a contract between the Grantee and the U.S. firm selected by the Grantee ("Contractor") under which the Contractor will perform the Study ("Contract"). Payment to the Contractor will be made directly by USTDA on behalf of the Grantee with the USTDA Grant funds provided under this Grant Agreement.

2. Terms of Reference

The Terms of Reference for the Study ("Terms of Reference") are attached as Annex I and are hereby made a part of this Grant Agreement. The Study will examine the technical, financial, environmental, and other critical aspects of the proposed Project. The Terms of Reference for the Study shall also be included in the Contract.

3. Standards of Conduct

USTDA and the Grantee recognize the existence of standards of conduct for public officials, and commercial entities, in their respective countries. The parties to this Grant Agreement and the Contractor shall observe these standards, which include not accepting payment of money or anything of value, directly or indirectly, from any person for the purpose of illegally or improperly inducing anyone to take any action favorable to any party in connection with the Study.

4. Grantee Responsibilities

The Grantee shall undertake its best efforts to provide reasonable support for the Contractor.

5. USTDA as Financier

(A) USTDA Approval of Competitive Selection Procedures

Selection of the U.S. Contractor shall be carried out by the Grantee according to its established procedures for the competitive selection of Contractors with advance notice of the procurement published online through *Federal Business Opportunities (www.fedbizopps.gov)*. Upon request, the Grantee will submit these contracting procedures and related documents to USTDA for information and/or approval.

(B) USTDA Approval of Contractor Selection

The Grantee shall notify USTDA at the address of record set forth in Article 17 below upon selection of the Contractor to perform the Study. Upon approval of this selection by USTDA, the Grantee and the Contractor shall then enter into a contract for performance of the Study. The Grantee shall notify in writing the U.S. firms that submitted unsuccessful proposals to perform the Study that they were not selected.

(C) USTDA Approval of Contract Between Grantee and Contractor

The Grantee and the Contractor shall enter into a contract for performance of the Study. This contract, and any amendments thereto, including assignments and changes in the Terms of Reference, must be approved by USTDA in writing. To expedite this approval, the Grantee (or the Contractor on the Grantee's behalf) shall transmit to USTDA, at the address set forth in Article 17 below, a photocopy of an English language version of the signed contract or a final negotiated draft version of the contract.

(D) USTDA Not a Party to the Contract

It is understood by the parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of the contract and any amendments thereto, including assignments, the selection of all Contractors, the Terms of Reference, the Final Report, and any and all documents related to any contract funded under the Grant Agreement. The parties hereto further understand and agree that USTDA, in reserving any or all of the foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of funding the Study and shall not be construed as making USTDA a party to the contract. The parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the parties to the contract or any subcontract, jointly or separately, without thereby incurring any responsibility or liability to such parties. Any approval or failure to approve by USTDA shall not bar the Grantee or USTDA from asserting any right they might have against the

Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Grantee or USTDA.

(E) Grant Agreement Controlling

Regardless of USTDA approval, the rights and obligations of any party to the contract or subcontract thereunder must be consistent with this Grant Agreement. In the event of any inconsistency between the Grant Agreement and any contract or subcontract funded by the Grant Agreement, the Grant Agreement shall be controlling.

6. Disbursement Procedures

(A) USTDA Approval of Contract Required

USTDA will make disbursements of Grant funds directly to the Contractor only after USTDA approves the Grantee's contract with the Contractor.

(B) Contractor Invoice Requirements

The Grantee should request disbursement of funds by USTDA to the Contractor for performance of the Study by submitting invoices in accordance with the procedures set forth in the USTDA Mandatory Clauses in Annex II.

7. Effective Date

The effective date of this Grant Agreement ("Effective Date") shall be the date of signature by both parties or, if the parties sign on different dates, the date of the last signature.

8. Study Schedule

(A) Study Completion Date

The completion date for the Study, which is June 1, 2011, is the date by which the parties estimate that the Study will have been completed.

(B) Time Limitation on Disbursement of USTDA Grant Funds

Except as USTDA may otherwise agree, (a) no USTDA funds may be disbursed under this Grant Agreement for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (b) all funds made available under the Grant Agreement must be disbursed within four (4) years from the Effective Date of the Grant Agreement.

9. USTDA Mandatory Clauses

All contracts funded under this Grant Agreement shall include the USTDA mandatory clauses set forth in Annex II to this Grant Agreement. All subcontracts funded or partially funded with USTDA Grant funds shall include the USTDA mandatory clauses, except for clauses B(1), G, H, I, and J.

10. Use of U.S. Carriers

(A) Air

Transportation by air of persons or property funded under the Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

(B) Marine

Transportation by sea of property funded under the Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

11. Nationality, Source and Origin

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and services funded by USTDA under the Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from Host Country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for performance of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to Study support (e.g., local lodging, food, and transportation) in Host Country are not subject to the above restrictions. USTDA will make available further details concerning these provisions upon request.

12. Taxes

USTDA funds provided under the Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in Host Country. Neither the Grantee nor the Contractor will seek reimbursement from USTDA for such taxes, tariffs, duties, fees or other levies.

13. Cooperation Between Parties and Follow-Up

The parties will cooperate to assure that the purposes of the Grant Agreement are accomplished. For five (5) years following receipt by USTDA of the Final Report (as defined in Clause I of Annex II), the Grantee agrees to respond to any reasonable inquiries from USTDA about the status of the Project.

14. Implementation Letters

To assist the Grantee in the implementation of the Study, USTDA may, from time to time, issue implementation letters that will provide additional information about matters covered by the Grant Agreement. The parties may also use jointly agreed upon implementation letters to confirm and record their mutual understanding of matters covered by the Grant Agreement.

15. Recordkeeping and Audit

The Grantee agrees to maintain books, records, and other documents relating to the Study and the Grant Agreement adequate to demonstrate implementation of its responsibilities under the Grant Agreement, including the selection of Contractors, receipt and approval of contract deliverables, and approval or disapproval of Contractor invoices for payment by USTDA. Such books, records, and other documents shall be separately maintained for three (3) years after the date of the final disbursement by USTDA. The Grantee shall afford USTDA or its authorized representatives the opportunity at reasonable times to review books, records, and other documents relating to the Study and the Grant Agreement.

16. Representation of Parties

For all purposes relevant to the Grant Agreement, the Government of the United States of America will be represented by the U. S. Ambassador to Host Country or USTDA and Grantee will be represented by the Director of the Department of Oil and Gas. The parties hereto may, by written notice, designate additional representatives for all purposes under the Grant Agreement.

17. Addresses of Record for Parties

Any notice, request, document, or other communication submitted by either party to the other under the Grant Agreement shall be in writing or through a wire or electronic medium which produces a tangible record of the transmission, such as a telegram, cable or facsimile, and will be deemed duly given or sent when delivered to such party at the following:

To: Ms. Wang Jing
Deputy Director

Division of Oil and Natural Gas, Department of Oil and Natural Gas
National Energy Administration (NEA)
No. 38 S. Yuetan Street
Beijing 100824
People's Republic of China

Phone: 8610-6850-1603
Fax: 8610-6850-2074
E-mail: wangj@ndrc.gov.cn

To: U.S. Trade and Development Agency
1000 Wilson Boulevard, Suite 1600
Arlington, Virginia 22209-3901
USA

Phone: (703) 875-4357
Fax: (703) 875-4009

All such communications shall be in English, unless the parties otherwise agree in writing. In addition, the Grantee shall provide the Commercial Section of the U.S. Embassy in Host Country with a copy of each communication sent to USTDA.

Any communication relating to this Grant Agreement shall include the following fiscal data:

Appropriation No.: 11 10/11 1001
Activity No.: 2010-31042A
Reservation No.: 2010310052
Grant No.: GH2010310012

18. Termination Clause

Either party may terminate the Grant Agreement by giving the other party thirty (30) days advance written notice. The termination of the Grant Agreement will end any obligations of the parties to provide financial or other resources for the Study, except for payments which they are committed to make pursuant to noncancellable commitments entered into with third parties prior to the written notice of termination.

19. Non-waiver of Rights and Remedies

No delay in exercising any right or remedy accruing to either party in connection with the Grant Agreement shall be construed as a waiver of such right or remedy.

20. U.S. Technology and Equipment

By funding this Study, USTDA seeks to promote the project objectives of the Host Country through the use of U.S. technology, goods, and services. In recognition of this purpose, the Grantee agrees that it will allow U.S. suppliers to compete in the procurement of technology, goods and services needed for Project implementation.

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IN WITNESS WHEREOF, the Government of the United States of America and National Energy Administration, each acting through its duly authorized representative, have caused this Agreement to be signed in the English language in their names and delivered as of the day and year written below. In the event that this Grant Agreement is signed in more than one language, the English language version shall govern.

For the Government of the United States of America	**For the National Energy Administration**
By:_____	By:_____
Date:_____	Date: _____
Witnessed:	Witnessed:
By:_____	By:_____

Annex I -- Terms of Reference

Annex II -- USTDA Mandatory Clauses

Annex I

TERMS OF REFERENCE

The purpose of this project is to identify two model projects that fit China's national Tri-Generation model program and to analyze their feasibilities. This project will showcase the selected technology, and will promote Sino-U.S. cooperation in the areas of decentralized energy's key technology and equipment.

Task 1: Project Performance Measurement

Metrics are needed to measure the long-term impacts of the feasibility studies in a way that meets the internal reporting requirements of the Grantee.

Subtasks

The Contractor shall:

1a. Travel to Beijing and meet with the Grantee to compile a set of project-specific performance metrics. These metrics shall represent the Grantee's priorities and be designed to assess the success of the model projects. The metrics may include:

- The number and types of Natural Gas Tri-Generation projects implemented as a result of the feasibility studies.
- The number of jobs created and people trained in the host country.
- The types and quantity of technology introduced to the host country.
- The productivity or efficiency improvements realized by the host country.
- The types of systematic reforms, such as energy diversification or market-oriented reforms that encourage independent power production, that resulted in improved economic performance in the host country.
- The types of goods and services purchased during the implementation of the Natural Gas Tri-Generation projects, the identities of the suppliers, and the values of the contracts.

1b. Draft a questionnaire to be used by the Grantee to survey project participants on the project performance metrics. The questionnaire should be in Adobe Acrobat format, limited to two pages, include self-explanatory questions in both Chinese and English, and provide answer fields that accept both Chinese and English characters that can be filled in, saved, and transmitted electronically.

1c. Draft a reporting form to be used by the Grantee to consolidate the information received from the project participants. The information on the reporting form should include data that quantifies the performance of the project organized in a logical format. The form shall be translated into Chinese.

1d. Establish a project reporting schedule. At a minimum, the schedule shall require information to be updated once a year for a period of three years following the completion of the feasibility studies.

Deliverables

The Contractor shall submit a questionnaire, reporting form and schedule to the Grantee in accordance with all requirements under this task.

Task 2: Model Projects Identification

Two model project host sites for the feasibility studies must be selected based on the national Natural Gas Tri-Generation development policy. The Chinese national Natural Gas Tri-Generation pilot program is restricted to projects producing up to fifty megawatts of electric power from natural gas in a single unit with the electricity and heat produced and consumed at the same point or in the same area. One model project shall focus on Natural Gas Tri-Generation in the industrial sector in an appropriate Economic Development Zone and the other shall focus on Natural Gas Tri-Generation in China's commercial sector (e.g., office buildings, hotels, hospitals).

Subtasks

The Contractor shall:

2a. Meet with the Grantee and the U.S.-China Energy Cooperation Program (ECP) DECHP working group in Beijing to review potential Natural Gas Tri-Generation business opportunities throughout China. Prior to travel, the Contractor will receive a list of two potential projects from the Grantee. One will demonstrate, in an appropriate Economic Development Zone, an industrial sector technology, and one project will demonstrate a commercial sector technology. The list will include project summaries with locations, applications, capacities, and site contact information.

2b. Meet with local government officials with jurisdiction over the potential model projects to investigate local Natural Gas Tri-Generation development plans and to gauge their level of support for the proposed model projects. The meetings shall include local development and reform commissions, economic and energy commissions, finance departments, and environmental protection bureaus.

2c. Meet with the potential model project owners to determine their ability and desire to purchase and operate Natural Gas Tri-Generation equipment.

2d. The Contractor shall confirm the recommendations of the two sites. If the Contractor does not agree with either of the recommended selections, the Contractor shall coordinate with the Grantee to select other site(s).

2e. Establish a criteria, in collaboration with the Grantee and the ECP DECHP working group, to assess the feasibilities of the selected model projects.

Deliverables

The Contractor shall draft and submit a project selection report to the Grantee, translated into Chinese. The report shall include an executive summary and description of each project evaluated; the project owners' management, financial conditions, and commitments; the physical project locations, their regions, and climates; the project applications; and the project electric power and thermal requirements. In addition, the report shall assess each project's compliance with the national Natural Gas Tri-Generation development policy; their national relevance and broad national market applicability; the development plans, policies, and funding programs of local governments having jurisdiction over each project; the energy balances between production and consumption; and the fuel supplies, capacities, reliabilities, and qualities. Furthermore, the report shall recommend and justify one industrial project and one commercial project for demonstration. Finally, the report shall set forth model project feasibility criteria by which each project will be measured including efficiency and cost objectives.

Task 3: Technical Assessments

The technical assessments will evaluate the technologies relevant to the selected model projects, recommend specific equipment, and establish the requirements for their installation and operation.

Subtasks

The Contractor shall:

3a. Collect and evaluate relevant background data from ECP DECHP working group member companies regarding reciprocating engines, gas turbines, steam turbines, microturbines, fuel cells, heat recovery steam generators, and chillers. At a minimum, the data should include product specifications, applications, prices, and installation references or case studies.

3b. Calculate the electric power, heating, and cooling loads required by each model project energy consumer(s).

3c. Recommend all necessary equipment best suited to construct each model project.

3d. Calculate the required utilities needed to operate the equipment for each model project including natural gas, potable water, cooling water, and electric power.

3e. Survey the two physical model project locations for available utilities such as natural gas, potable water, cooling water, electric power, access to the electric and thermal grids, and soil condition.

3f. Evaluate the suitability of the natural gas delivery systems to supply each model project including its capacity, reliability, and quality.

3g. Model the performances of the recommended equipment under each of the actual model project site conditions to determine their expected efficiencies.

3h. Prepare preliminary specifications and conceptual equipment layouts of the recommended equipment for each model project to provide a basis for site permitting and to allow for an accurate installation cost estimate.

3i. Determine the labor requirements including man-hours, technical qualifications, and cost for operating and maintaining the equipment at each model site.

3j. Identify technical barriers to interconnection with the electric power transmission grid and thermal grid at each model project site.

Deliverables

The Contractor shall draft and submit to the Grantee one technical assessment report for the industrial model project and one technical assessment report for the commercial model project, translated into Chinese. Each report shall include an executive summary and describe the proposed system design; the process (with a block flow diagram); the electric, heat, and cooling loads; the utilities, chemicals, and waste products; the equipment (with specifications and suppliers); and the conceptual equipment layout. In addition, the reports shall assess energy efficiency, emissions, reliability, and operability under the feasibility criteria established under Task 2.

Task 4: Economic Analyses

The economic analyses will determine whether each model project's cumulative benefits outweigh its cumulative costs. The analyses should consider market conditions; raw material availability, stability, and price level; national and local tax framework; the operating and maintenance costs of the equipment; the heating, cooling, and power load demands; consumer trends, and competing alternative methods of achieving the same or similar model project objectives.

Subtasks

The Contractor shall:

4a. Estimate the capital costs, operating and maintenance costs, and the sales and other revenues or cost savings for each model project, based on local energy prices, which would result if the model projects are implemented.

4b. Provide technical economic evaluations that consider the effects of long-term natural gas price stability; power connection investment; imported equipment price stability; and load matching on each of the model projects as well as the impacts of large area deployment of similar projects in China on its national economy.

4c. Provide cash flow analyses including rates of return and paybacks for each model project.

Deliverables

The Contractor shall draft and submit to the Grantee one economic analysis report for the industrial model project and one economic analysis report for the commercial model project, translated into Chinese. Each report shall include an executive summary and provide a cost analysis of capital costs, operating and maintenance costs, and revenues or cost savings while clearly stating all assumptions. In addition, the reports shall provide a technical economic evaluation, a cost versus benefit analysis, and the rate of return and payback period in accordance with all requirements under this task.

Task 5: Financial Analyses

The financial analyses will consider the availability of equity and debt financing for each model project as well as the views of potential public and private financing organizations such as the World Bank, the Asian Development Bank, and the Export-Import Bank of the United States.

Subtasks

The Contractor shall:

5a. Evaluate potential project debt-equity financing structures for each model project.

5b. Identify at least two private and two public sector financing options for each model project.

5c. Determine the lending requirements of the potential financing institutions.

5d. Evaluate the financial risk for each model project including investment risk and credit risk. Estimate cash flow and profitability, and assess each model project's ability to meet its debt obligations.

Deliverables

The Contractor shall draft and submit to the Grantee one financial analysis report for the industrial model project and one financial analysis report for the commercial model project, translated into Chinese. Each report shall include an executive summary and describe the possible financing structures considering the capital budget, working capital requirements, and debt-equity ratio. In addition, the reports shall identify financing sources including the project owner, other investors, and financial institutions, and describe the necessary planning documents and other lending requirements. Furthermore, the reports shall assess the financial risks including the borrowers' credit worthiness. Finally, the reports shall include pro-forma financial models for the various financing structures.

Task 6: Environmental Analyses

The environmental analyses will predict the impacts the model projects will have on the natural, social, technology, and economic environments of the local communities.

Subtasks

The Contractor shall:

6a. Review all environmental regulations applicable to each model project.

6b. Conduct a preliminary review of each model project's anticipated impact on the environment with reference to environmental regulations.

6c. Assess the socioeconomic impact of each model project on the community, including employment creation, quality of life, basic infrastructure improvement, productivity improvement, technology transfer, and safety.

6d. Identify potential negative impacts of each model project, discuss the extent to which they can be mitigated, and develop plans for full environmental impact assessments for each model project's implementation stage.

6e. Identify the steps that will need to be taken, subsequent to completion of each feasibility study and prior to the implementation of each model project, to address all environmental concerns including a list of project approval documents required by local authorities and possible community outreach and education.

6f. Evaluate the impacts of each model project on carbon emissions and climate change. For each model project, quantify the energy savings and emissions reduction achieved by combining heat and power production instead of generating each separately. Quantify the effects of the power to heat ratios and equipment efficiencies on energy savings and emissions reduction. Provide an estimate of the effect each model project will have on its local air pollution index.

Deliverables

The Contractor shall draft and submit to the Grantee one environmental analysis report for the industrial model project and one environmental analysis report for the commercial model project, translated into Chinese. Each report shall include an executive summary and describe the project location, the project design, the applicable regulations, and the required permits and licenses. In addition, the reports shall describe the existing environment in terms of the human population (employment, quality of life, and safety), air and water quality, animal species, vegetation, and land use. Furthermore, the reports shall assess the environmental impacts on the human population (employment, quality of life, and safety), air and water quality, animal species, vegetation, and land use in accordance with all requirements under this task.

Task 7: Policy and Regulatory Review

The policy and regulatory review will identify government strategies and legal requirements that will impact each model project's implementation prospects and the development of Natural Gas Tri-Generation in China, and recommend policies to the NEA that will encourage expanded deployment of Natural Gas Tri-Generation in China.

Subtasks

The Contractor shall:

7a. Analyze the Chinese electric power sector institutional and regulatory structures to identify the chief agencies and to gauge their support for each model project.

7b. Review siting and permitting requirements and establish siting criteria for each model project.

7c. Identify the national, regional, and local transmission interconnection standards, codes, and regulations that could impact the type of equipment recommended or the viability of implementing the model projects.

7d. Identify the legal and regulatory requirements that would need to be addressed before the model projects could be implemented and detail the steps that should be taken in order to proceed with the model projects.

7e. Review existing policies and regulations and recommend changes and additions to encourage more rapid development of Natural Gas Tri-Generation in China.

Deliverables

The Contractor shall draft and submit to the Grantee a policy and regulatory review report, translated into Chinese. The report shall include an executive summary and describe the Chinese Natural Gas Tri-Generation market in terms of energy and climate

change, current market conditions, market potential and benefits, and barriers to Natural Gas Tri-Generation development. In addition, the report shall identify Chinese Natural Gas Tri-Generation regulatory agencies, current policies, standards, codes and regulations, and siting and permitting requirements. Furthermore, the report shall assess the impact of current policies, standards, codes and regulations, and siting and permitting requirements on Natural Gas Tri-Generation development in China. Finally, the report shall recommend policies and regulations that will encourage expanded deployment of Natural Gas Tri-Generation in China.

Task 8: Host Country Development Impacts Analyses

The development impacts analyses will provide stakeholders with a broad view of the potential effects of each model project on the host country.

Subtasks

The Contractor shall:

8a. Report on the potential development impacts of each model project on the host country. Focus on what the economic development outcomes will be if the model projects are implemented according to the study recommendations. The reports shall be translated into Chinese.

8b. Provide estimates of each model project's potential benefits in the following areas:

- Infrastructure. State the impact on China's electric power infrastructure.
- Market-oriented reform. Describe any regulation, laws, or institutional changes that are recommended and the effect they would have if implemented.
- Human capacity building. Address the number and type of positions that would be needed to construct and operate the proposed model projects as well as the number of people who would receive training and a description of the training programs.
- Technology transfer and productivity enhancement. Describe any advanced technologies that would be implemented as a result of each model project and describe any efficiency that would be gained.
- Other. Identify any other development benefits of the model projects, including any spin-off effects.

Deliverables

The Contractor shall draft and submit to the Grantee one development impacts report for the industrial model project and one development impacts report for the commercial

model project in accordance with all requirements under this task, translated into Chinese.

Task 9: U.S. Supplier Analysis

The supplier analysis will determine the availability of suitable U.S. sources of supply for goods and services needed to implement the model projects.

Subtasks

The Contractor shall:

9a. Compile an illustrative list of U.S. suppliers for those goods and services likely to be sourced in the United States during the implementation of each model project.

9b. Provide the company name, point of contact, address, telephone number, fax number, and e-mail address for each U.S. supplier.

9c. Prepare a U.S. Natural Gas Tri-Generation technology supplier directory. The directory shall be translated into Chinese.

Deliverable

The Contractor shall draft and submit to the Grantee a U.S. Natural Gas Tri-Generation technology supplier directory in accordance with all requirements under this task, translated into Chinese.

Task 10: U.S. Experience in Tri-Cogeneration

The Contractor shall:

10a. Produce an overview of U.S. Tri-Cogeneration development and history

10b. Report on current U.S. federal policy on Tri-Cogeneration

10c. Report on current U.S. federal distributed energy policy

10d. Report on U.S. regulation of Tri-Cogeneration's grid inter-connection and relevant technical standards

10e. Report on U.S. Tri-Cogeneration's involvement in peak-shaving and analysis on how it affects grid peak-shaving.

10f. Report on the forecast and planning of thr U.S. Tri-Cogeneration industry

10g. Report on the U.S. consumption of natural gas resulting from Tri-Generation consumption, and analysis of guaranteeing sufficient supply of natural gas resources.

10h. Case study of a typical U.S. Tri-Generation Project (from project preparation to implementation and its operation)

10i. U.S. Tri-Generation equipment market analysis

10j. Prepare recommendations for China's effective use of Tri-Generation

Deliverable:

The Contractor shall prepare a report on the U.S. practices in Tri-Generation and recommendations for China's expanded use of Tri-Generation, in accordance with all items under this task.

Task 11: Final Report

The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive final report of all work performed under these Terms of Reference ("Final Report"). The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall be prepared in accordance with Clause I of Annex II of the Grant Agreement and be in the following format:

I. Executive Summary
II. Model projects selection
III. Technical Assessment
IV. Economic Analysis
V. Financial Analysis
VI. Environmental Analysis
VII. Policy and Regulatory Review
VIII. Host Country Development Impacts Analysis
IX. U.S. Natural Gas Tri-Generation Technology Supplier Directory
X. U.S. Tri-Generation Study

In addition to any other required deliverables in accordance with Clause I of Annex II of the Grant Agreement, the Contractor shall provide both the Grantee and the USTDA with public versions of the final reports on CD-ROM. The CD-ROM versions shall include:

- Adobe Acrobat readable copies of all documents.
- Source files for all drawings in AutoCAD or Visio format.
- Source files for all documents in MS Office 2000 or later formats.

All reports shall be translated into Chinese. Both English and Chinese versions shall be submitted for approval.

Notes:

(1) The Contractor is responsible for compliance with U.S. export licensing requirements, if applicable, in the performance of the Terms of Reference.

(2) The Contractor and the Grantee shall be careful to ensure that the public version of the Final Report contains no security or confidential information.

(3) The Grantee and USTDA shall have an irrevocable, worldwide, royalty-free, non-exclusive right to use and distribute the Final Report and all work product that is developed under these Terms of Reference.

Annex II

USTDA Mandatory Contract Clauses

A. USTDA Mandatory Clauses Controlling

The parties to this contract acknowledge that this contract is funded in whole or in part by the U.S. Trade and Development Agency ("USTDA") under the Grant Agreement between the Government of the United States of America acting through USTDA and National Energy Administration("Client"), dated _____ ("Grant Agreement"). The Client has selected _____ ("Contractor") to perform the feasibility study ("Study") for the Natural Gas Tri-Generation Model Projects project ("Project") in the Peoples' Republic of China ("Host Country"). Notwithstanding any other provisions of this contract, the following USTDA mandatory contract clauses shall govern. All subcontracts entered into by Contractor funded or partially funded with USTDA Grant funds shall include these USTDA mandatory contract clauses, except for clauses B(1), G, H, I, and J. In addition, in the event of any inconsistency between the Grant Agreement and any contract or subcontract thereunder, the Grant Agreement shall be controlling.

B. USTDA as Financier

(1) USTDA Approval of Contract

All contracts funded under the Grant Agreement, and any amendments thereto, including assignments and changes in the Terms of Reference, must be approved by USTDA in writing in order to be effective with respect to the expenditure of USTDA Grant funds. USTDA will not authorize the disbursement of USTDA Grant funds until the contract has been formally approved by USTDA or until the contract conforms to modifications required by USTDA during the contract review process.

(2) USTDA Not a Party to the Contract

It is understood by the parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of this contract and amendments thereto, including assignments, the selection of all Contractors, the Terms of Reference, the Final Report, and any and all documents related to any contract funded under the Grant Agreement. The parties hereto further understand and agree that USTDA, in reserving any or all of the foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of financing the Study and shall not be construed as making USTDA a party to the contract. The parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the parties to the contract or any subcontract, jointly or separately, without thereby incurring any responsibility or liability to such parties. Any approval or failure to approve by USTDA shall not bar the Client or USTDA from asserting any right

they might have against the Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Client or USTDA.

C. Nationality, Source and Origin

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and services funded by USTDA under the Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from Host Country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for performance of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to Study support (e.g., local lodging, food, and transportation) in Host Country are not subject to the above restrictions. USTDA will make available further details concerning these provisions upon request.

D. Recordkeeping and Audit

The Contractor and subcontractors funded under the Grant Agreement shall maintain, in accordance with generally accepted accounting procedures, books, records, and other documents, sufficient to reflect properly all transactions under or in connection with the contract. These books, records, and other documents shall clearly identify and track the use and expenditure of USTDA funds, separately from other funding sources. Such books, records, and documents shall be maintained during the contract term and for a period of three (3) years after final disbursement by USTDA. The Contractor and subcontractors shall afford USTDA, or its authorized representatives, the opportunity at reasonable times for inspection and audit of such books, records, and other documentation.

E. U.S. Carriers

(1) Air

Transportation by air of persons or property funded under the Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

(2) Marine

Transportation by sea of property funded under the Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

F. Workman's Compensation Insurance

The Contractor shall provide adequate Workman's Compensation Insurance coverage for work performed under this Contract.

G. Reporting Requirements

The Contractor shall advise USTDA by letter as to the status of the Project on March 1st annually for a period of two (2) years after completion of the Study. In addition, if at any time the Contractor receives follow-on work from the Client, the Contractor shall so notify USTDA and designate the Contractor's contact point including name, telephone, and fax number. Since this information may be made publicly available by USTDA, any information which is confidential shall be designated as such by the Contractor and provided separately to USTDA. USTDA will maintain the confidentiality of such information in accordance with applicable law.

H. Disbursement Procedures

(1) USTDA Approval of Contract

Disbursement of Grant funds will be made only after USTDA approval of this contract. To make this review in a timely fashion, USTDA must receive from either the Client or the Contractor a photocopy of an English language version of a signed contract or a final negotiated draft version to the attention of the General Counsel's office at USTDA's address listed in Clause M below.

(2) Payment Schedule Requirements

A payment schedule for disbursement of Grant funds to the Contractor shall be included in this Contract. Such payment schedule must conform to the following USTDA requirements: (1) up to twenty percent (20%) of the total USTDA Grant amount may be used as a mobilization payment; (2) all other payments, with the exception of the final payment, shall be based upon contract performance milestones; and (3) the final payment may be no less than fifteen percent (15%) of the total USTDA Grant amount, payable upon receipt by USTDA of an approved Final Report in accordance with the specifications and quantities set forth in Clause I below. Invoicing procedures for all payments are described below.

(3) Contractor Invoice Requirements

USTDA will make all disbursements of USTDA Grant funds directly to the Contractor. The Contractor must provide USTDA with an ACH Vendor Enrollment Form (available from USTDA) with the first invoice. The Client shall request disbursement of funds by USTDA to the Contractor for performance of the contract by submitting the following to USTDA:

(a) Contractor's Invoice

The Contractor's invoice shall include reference to an item listed in the Contract payment schedule, the requested payment amount, and an appropriate certification by the Contractor, as follows:

(i) For a mobilization payment (if any):

"As a condition for this mobilization payment, the Contractor certifies that it will perform all work in accordance with the terms of its Contract with the Client. To the extent that the Contractor does not comply with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA. "

(ii) For contract performance milestone payments:

"The Contractor has performed the work described in this invoice in accordance with the terms of its contract with the Client and is entitled to payment thereunder. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(iii) For final payment:

"The Contractor has performed the work described in this invoice in accordance with the terms of its contract with the Client and is entitled to payment thereunder. Specifically, the Contractor has submitted the Final Report to the Client, as required by the Contract, and received the Client's approval of the Final Report. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(b) Client's Approval of the Contractor's Invoice

(i) The invoice for a mobilization payment must be approved in writing by the Client.

(ii) For contract performance milestone payments, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and the terms and conditions of the USTDA Grant Agreement."

(iii) For final payment, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and terms

and conditions of the USTDA Grant Agreement. The Final Report submitted by the Contractor has been reviewed and approved by the Client. "

(c) USTDA Address for Disbursement Requests

Requests for disbursement shall be submitted by courier or mail to the attention of the Finance Department at USTDA's address listed in Clause M below.

(4) Termination

In the event that the Contract is terminated prior to completion, the Contractor will be eligible, subject to USTDA approval, for reasonable and documented costs which have been incurred in performing the Terms of Reference prior to termination, as well as reasonable wind down expenses. Reimbursement for such costs shall not exceed the total amount of undisbursed Grant funds. Likewise, in the event of such termination, USTDA is entitled to receive from the Contractor all USTDA Grant funds previously disbursed to the Contractor (including but not limited to mobilization payments) which exceed the reasonable and documented costs incurred in performing the Terms of Reference prior to termination.

I. USTDA Final Report

(1) Definition

"Final Report" shall mean the Final Report described in the attached Annex I Terms of Reference or, if no such "Final Report" is described therein, "Final Report" shall mean a substantive and comprehensive report of work performed in accordance with the attached Annex I Terms of Reference, including any documents delivered to the Client.

(2) Final Report Submission Requirements

The Contractor shall provide the following to USTDA:

(a) One (1) complete version of the Final Report for USTDA's records. This version shall have been approved by the Client in writing and must be in the English language. It is the responsibility of the Contractor to ensure that confidential information, if any, contained in this version be clearly marked. USTDA will maintain the confidentiality of such information in accordance with applicable law.
and

(b) One (1) copy of the Final Report suitable for public distribution ("Public Version"). The Public Version shall have been approved by the Client in writing and must be in the English language. As this version will be available for public distribution, it must not contain any confidential information. If the report in (a) above contains no confidential information, it may be used as the Public Version. In any event, the Public Version must be informative and contain sufficient Project detail to be useful to prospective equipment and service providers.

and

(c) Two (2) CD-ROMs, each containing a complete copy of the Public Version of the Final Report. The electronic files on the CD-ROMs shall be submitted in a commonly accessible read-only format. As these CD-ROMs will be available for public distribution, they must not contain any confidential information. It is the responsibility of the Contractor to ensure that no confidential information is contained on the CD-ROMs.

The Contractor shall also provide one (1) copy of the Public Version of the Final Report to the Foreign Commercial Service Officer or the Economic Section of the U.S. Embassy in Host Country for informational purposes.

(3) Final Report Presentation

All Final Reports submitted to USTDA must be paginated and include the following:

(a) The front cover of every Final Report shall contain the name of the Client, the name of the Contractor who prepared the report, a report title, USTDA's logo, USTDA's mailing and delivery addresses. If the complete version of the Final Report contains confidential information, the Contractor shall be responsible for labeling the front cover of that version of the Final Report with the term "Confidential Version." The Contractor shall be responsible for labeling the front cover of the Public Version of the Final Report with the term "Public Version." The front cover of every Final Report shall also contain the following disclaimer:

"This report was funded by the U.S. Trade and Development Agency (USTDA), an agency of the U. S. Government. The opinions, findings, conclusions or recommendations expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of USTDA. USTDA makes no representation about, nor does it accept responsibility for, the accuracy or completeness of the information contained in this report."

(b) The inside front cover of every Final Report shall contain USTDA's logo, USTDA's mailing and delivery addresses, and USTDA's mission statement. Camera-ready copy of USTDA Final Report specifications will be available from USTDA upon request.

(c) The Contractor shall affix to the front of the CD-ROM a label identifying the Host Country, USTDA Activity Number, the name of the Client, the name of the Contractor who prepared the report, a report title, and the following language:

"The Contractor certifies that this CD-ROM contains the Public Version of the Final Report and that all contents are suitable for public distribution."

(d) The Contractor and any subcontractors that perform work pursuant to the Grant Agreement must be clearly identified in the Final Report. Business name, point of contact, address, telephone and fax numbers shall be included for Contractor and each subcontractor.

(e) The Final Report, while aiming at optimum specifications and characteristics for the Project, shall identify the availability of prospective U.S. sources of supply. Business name, point of contact, address, telephone and fax numbers shall be included for each commercial source.

(f) The Final Report shall be accompanied by a letter or other notation by the Client which states that the Client approves the Final Report. A certification by the Client to this effect provided on or with the invoice for final payment will meet this requirement.

J. Modifications

All changes, modifications, assignments or amendments to this contract, including the appendices, shall be made only by written agreement by the parties hereto, subject to written USTDA approval.

K. Study Schedule

(1) Study Completion Date

The completion date for the Study, which is June 1, 2011, is the date by which the parties estimate that the Study will have been completed.

(2) Time Limitation on Disbursement of USTDA Grant Funds

Except as USTDA may otherwise agree, (a) no USTDA funds may be disbursed under this contract for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (b) all funds made available under the Grant Agreement must be disbursed within four (4) years from the Effective Date of the Grant Agreement.

L. Business Practices

The Contractor agrees not to pay, promise to pay, or authorize the payment of any money or anything of value, directly or indirectly, to any person (whether a governmental official or private individual) for the purpose of illegally or improperly inducing anyone to take any action favorable to any party in connection with the Study. The Client agrees not to receive any such payment. The Contractor and the Client agree that each will require that any agent or representative hired to represent them in connection with the Study will comply with this paragraph and all laws which apply to activities and obligations of each party under this Contract, including but not limited to those laws and obligations dealing with improper payments as described above.

M. USTDA Address and Fiscal Data

Any communication with USTDA regarding this Contract shall be sent to the following address and include the fiscal data listed below:

U.S. Trade and Development Agency
1000 Wilson Boulevard, Suite 1600
Arlington, Virginia 22209-3901
USA

Phone: (703) 875-4357
Fax: (703) 875-4009

Fiscal Data:

Appropriation No.:	11 10/11 1001
Activity No.:	2010-31042A
Reservation No.:	2010310052
Grant No.:	GH2010310012

N. Definitions

All capitalized terms not otherwise defined herein shall have the meaning set forth in the Grant Agreement.

O. Taxes

USTDA funds provided under the Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in Host Country. Neither the Client nor the Contractor will seek reimbursement from USTDA for such taxes, tariffs, duties, fees or other levies.

ANNEX 5

TERMS OF REFERENCE

The purpose of this project is to identify two model projects that fit China's national Tri-Generation model program and to analyze their feasibilities. This project will showcase the selected technology, and will promote Sino-U.S. cooperation in the areas of decentralized energy's key technology and equipment.

Task 1: Project Performance Measurement

Metrics are needed to measure the long-term impacts of the feasibility studies in a way that meets the internal reporting requirements of the Grantee.

Subtasks

The Contractor shall:

1a. Travel to Beijing and meet with the Grantee to compile a set of project-specific performance metrics. These metrics shall represent the Grantee's priorities and be designed to assess the success of the model projects. The metrics may include:

- The number and types of Natural Gas Tri-Generation projects implemented as a result of the feasibility studies.
- The number of jobs created and people trained in the host country.
- The types and quantity of technology introduced to the host country.
- The productivity or efficiency improvements realized by the host country.
- The types of systematic reforms, such as energy diversification or market-oriented reforms that encourage independent power production, that resulted in improved economic performance in the host country.
- The types of goods and services purchased during the implementation of the Natural Gas Tri-Generation projects, the identities of the suppliers, and the values of the contracts.

1b. Draft a questionnaire to be used by the Grantee to survey project participants on the project performance metrics. The questionnaire should be in Adobe Acrobat format, limited to two pages, include self-explanatory questions in both Chinese and English, and provide answer fields that accept both Chinese and English characters that can be filled in, saved, and transmitted electronically.

1c. Draft a reporting form to be used by the Grantee to consolidate the information received from the project participants. The information on the reporting form should include data that quantifies the performance of the project organized in a logical format. The form shall be translated into Chinese.

1d. Establish a project reporting schedule. At a minimum, the schedule shall require information to be updated once a year for a period of three years following the completion of the feasibility studies.

Deliverables

The Contractor shall submit a questionnaire, reporting form and schedule to the Grantee in accordance with all requirements under this task.

Task 2: Model Projects Identification

Two model project host sites for the feasibility studies must be selected based on the national Natural Gas Tri-Generation development policy. The Chinese national Natural Gas Tri-Generation pilot program is restricted to projects producing up to fifty megawatts of electric power from natural gas in a single unit with the electricity and heat produced and consumed at the same point or in the same area. One model project shall focus on Natural Gas Tri-Generation in the industrial sector in an appropriate Economic Development Zone and the other shall focus on Natural Gas Tri-Generation in China's commercial sector (e.g., office buildings, hotels, hospitals).

Subtasks

The Contractor shall:

2a. Meet with the Grantee and the U.S.-China Energy Cooperation Program (ECP) DECHP working group in Beijing to review potential Natural Gas Tri-Generation business opportunities throughout China. Prior to travel, the Contractor will receive a list of two potential projects from the Grantee. One will demonstrate, in an appropriate Economic Development Zone, an industrial sector technology, and one project will demonstrate a commercial sector technology. The list will include project summaries with locations, applications, capacities, and site contact information.

2b. Meet with local government officials with jurisdiction over the potential model projects to investigate local Natural Gas Tri-Generation development plans and to gauge their level of support for the proposed model projects. The meetings shall include local development and reform commissions, economic and energy commissions, finance departments, and environmental protection bureaus.

2c. Meet with the potential model project owners to determine their ability and desire to purchase and operate Natural Gas Tri-Generation equipment.

2d. The Contractor shall confirm the recommendations of the two sites. If the Contractor does not agree with either of the recommended selections, the Contractor shall coordinate with the Grantee to select other site(s).

2e. Establish a criteria, in collaboration with the Grantee and the ECP DECHP working group, to assess the feasibilities of the selected model projects.

Deliverables

The Contractor shall draft and submit a project selection report to the Grantee, translated into Chinese. The report shall include an executive summary and description of each project evaluated; the project owners' management, financial conditions, and commitments; the physical project locations, their regions, and climates; the project applications; and the project electric power and thermal requirements. In addition, the report shall assess each project's compliance with the national Natural Gas Tri-Generation development policy; their national relevance and broad national market applicability; the development plans, policies, and funding programs of local governments having jurisdiction over each project; the energy balances between production and consumption; and the fuel supplies, capacities, reliabilities, and qualities. Furthermore, the report shall recommend and justify one industrial project and one commercial project for demonstration. Finally, the report shall set forth model project feasibility criteria by which each project will be measured including efficiency and cost objectives.

Task 3: Technical Assessments

The technical assessments will evaluate the technologies relevant to the selected model projects, recommend specific equipment, and establish the requirements for their installation and operation.

Subtasks

The Contractor shall:

3a. Collect and evaluate relevant background data from ECP DECHP working group member companies regarding reciprocating engines, gas turbines, steam turbines, microturbines, fuel cells, heat recovery steam generators, and chillers. At a minimum, the data should include product specifications, applications, prices, and installation references or case studies.

3b. Calculate the electric power, heating, and cooling loads required by each model project energy consumer(s).

3c. Recommend all necessary equipment best suited to construct each model project.

3d. Calculate the required utilities needed to operate the equipment for each model project including natural gas, potable water, cooling water, and electric power.

3e. Survey the two physical model project locations for available utilities such as natural gas, potable water, cooling water, electric power, access to the electric and thermal grids, and soil condition.

3f. Evaluate the suitability of the natural gas delivery systems to supply each model project including its capacity, reliability, and quality.

3g. Model the performances of the recommended equipment under each of the actual model project site conditions to determine their expected efficiencies.

3h. Prepare preliminary specifications and conceptual equipment layouts of the recommended equipment for each model project to provide a basis for site permitting and to allow for an accurate installation cost estimate.

3i. Determine the labor requirements including man-hours, technical qualifications, and cost for operating and maintaining the equipment at each model site.

3j. Identify technical barriers to interconnection with the electric power transmission grid and thermal grid at each model project site.

Deliverables

The Contractor shall draft and submit to the Grantee one technical assessment report for the industrial model project and one technical assessment report for the commercial model project, translated into Chinese. Each report shall include an executive summary and describe the proposed system design; the process (with a block flow diagram); the electric, heat, and cooling loads; the utilities, chemicals, and waste products; the equipment (with specifications and suppliers); and the conceptual equipment layout. In addition, the reports shall assess energy efficiency, emissions, reliability, and operability under the feasibility criteria established under Task 2.

Task 4: Economic Analyses

The economic analyses will determine whether each model project's cumulative benefits outweigh its cumulative costs. The analyses should consider market conditions; raw material availability, stability, and price level; national and local tax framework; the operating and maintenance costs of the equipment; the heating, cooling, and power load demands; consumer trends, and competing alternative methods of achieving the same or similar model project objectives.

Subtasks

The Contractor shall:

4a. Estimate the capital costs, operating and maintenance costs, and the sales and other revenues or cost savings for each model project, based on local energy prices, which would result if the model projects are implemented.

4b. Provide technical economic evaluations that consider the effects of long-term natural gas price stability; power connection investment; imported equipment price stability; and load matching on each of the model projects as well as the impacts of large area deployment of similar projects in China on its national economy.

4c. Provide cash flow analyses including rates of return and paybacks for each model project.

Deliverables

The Contractor shall draft and submit to the Grantee one economic analysis report for the industrial model project and one economic analysis report for the commercial model project, translated into Chinese. Each report shall include an executive summary and provide a cost analysis of capital costs, operating and maintenance costs, and revenues or cost savings while clearly stating all assumptions. In addition, the reports shall provide a technical economic evaluation, a cost versus benefit analysis, and the rate of return and payback period in accordance with all requirements under this task.

Task 5: Financial Analyses

The financial analyses will consider the availability of equity and debt financing for each model project as well as the views of potential public and private financing organizations such as the World Bank, the Asian Development Bank, and the Export-Import Bank of the United States.

Subtasks

The Contractor shall:

5a. Evaluate potential project debt-equity financing structures for each model project.

5b. Identify at least two private and two public sector financing options for each model project.

5c. Determine the lending requirements of the potential financing institutions.

5d. Evaluate the financial risk for each model project including investment risk and credit risk. Estimate cash flow and profitability, and assess each model project's ability to meet its debt obligations.

Deliverables

The Contractor shall draft and submit to the Grantee one financial analysis report for the industrial model project and one financial analysis report for the commercial model project, translated into Chinese. Each report shall include an executive summary and describe the possible financing structures considering the capital budget, working capital requirements, and debt-equity ratio. In addition, the reports shall identify financing sources including the

project owner, other investors, and financial institutions, and describe the necessary planning documents and other lending requirements. Furthermore, the reports shall assess the financial risks including the borrowers' credit worthiness. Finally, the reports shall include pro-forma financial models for the various financing structures.

Task 6: Environmental Analyses

The environmental analyses will predict the impacts the model projects will have on the natural, social, technology, and economic environments of the local communities.

Subtasks

The Contractor shall:

6a. Review all environmental regulations applicable to each model project.

6b. Conduct a preliminary review of each model project's anticipated impact on the environment with reference to environmental regulations.

6c. Assess the socioeconomic impact of each model project on the community, including employment creation, quality of life, basic infrastructure improvement, productivity improvement, technology transfer, and safety.

6d. Identify potential negative impacts of each model project, discuss the extent to which they can be mitigated, and develop plans for full environmental impact assessments for each model project's implementation stage.

6e. Identify the steps that will need to be taken, subsequent to completion of each feasibility study and prior to the implementation of each model project, to address all environmental concerns including a list of project approval documents required by local authorities and possible community outreach and education.

6f. Evaluate the impacts of each model project on carbon emissions and climate change. For each model project, quantify the energy savings and emissions reduction achieved by combining heat and power production instead of generating each separately. Quantify the effects of the power to heat ratios and equipment efficiencies on energy savings and emissions reduction. Provide an estimate of the effect each model project will have on its local air pollution index.

Deliverables

The Contractor shall draft and submit to the Grantee one environmental analysis report for the industrial model project and one environmental analysis report for the commercial model project, translated into Chinese. Each report shall include an executive summary and describe the project location, the project design, the applicable regulations, and the required permits and licenses. In addition, the reports shall describe the existing environment in terms of the human population (employment, quality of life, and safety), air and water quality,

animal species, vegetation, and land use. Furthermore, the reports shall assess the environmental impacts on the human population (employment, quality of life, and safety), air and water quality, animal species, vegetation, and land use in accordance with all requirements under this task.

Task 7: Policy and Regulatory Review

The policy and regulatory review will identify government strategies and legal requirements that will impact each model project's implementation prospects and the development of Natural Gas Tri-Generation in China, and recommend policies to the NEA that will encourage expanded deployment of Natural Gas Tri-Generation in China.

Subtasks

The Contractor shall:

7a. Analyze the Chinese electric power sector institutional and regulatory structures to identify the chief agencies and to gauge their support for each model project.

7b. Review siting and permitting requirements and establish siting criteria for each model project.

7c. Identify the national, regional, and local transmission interconnection standards, codes, and regulations that could impact the type of equipment recommended or the viability of implementing the model projects.

7d. Identify the legal and regulatory requirements that would need to be addressed before the model projects could be implemented and detail the steps that should be taken in order to proceed with the model projects.

7e. Review existing policies and regulations and recommend changes and additions to encourage more rapid development of Natural Gas Tri-Generation in China.

Deliverables

The Contractor shall draft and submit to the Grantee a policy and regulatory review report, translated into Chinese. The report shall include an executive summary and describe the Chinese Natural Gas Tri-Generation market in terms of energy and climate change, current market conditions, market potential and benefits, and barriers to Natural Gas Tri-Generation development. In addition, the report shall identify Chinese Natural Gas Tri-Generation regulatory agencies, current policies, standards, codes and regulations, and siting and permitting requirements. Furthermore, the report shall assess the impact of current policies, standards, codes and regulations, and siting and permitting requirements on Natural Gas Tri-Generation development in China. Finally, the report shall recommend policies and regulations that will encourage expanded deployment of Natural Gas Tri-Generation in China.

Task 8: Host Country Development Impacts Analyses

The development impacts analyses will provide stakeholders with a broad view of the potential effects of each model project on the host country.

Subtasks

The Contractor shall:

8a. Report on the potential development impacts of each model project on the host country. Focus on what the economic development outcomes will be if the model projects are implemented according to the study recommendations. The reports shall be translated into Chinese.

8b. Provide estimates of each model project's potential benefits in the following areas:

- Infrastructure. State the impact on China's electric power infrastructure.
- Market-oriented reform. Describe any regulation, laws, or institutional changes that are recommended and the effect they would have if implemented.
- Human capacity building. Address the number and type of positions that would be needed to construct and operate the proposed model projects as well as the number of people who would receive training and a description of the training programs.
- Technology transfer and productivity enhancement. Describe any advanced technologies that would be implemented as a result of each model project and describe any efficiency that would be gained.
- Other. Identify any other development benefits of the model projects, including any spin-off effects.

Deliverables

The Contractor shall draft and submit to the Grantee one development impacts report for the industrial model project and one development impacts report for the commercial model project in accordance with all requirements under this task, translated into Chinese.

Task 9: U.S. Supplier Analysis

The supplier analysis will determine the availability of suitable U.S. sources of supply for goods and services needed to implement the model projects.

Subtasks

The Contractor shall:

9a. Compile an illustrative list of U.S. suppliers for those goods and services likely to be sourced in the United States during the implementation of each model project.

9b. Provide the company name, point of contact, address, telephone number, fax number, and e-mail address for each U.S. supplier.

9c. Prepare a U.S. Natural Gas Tri-Generation technology supplier directory. The directory shall be translated into Chinese.

Deliverable

The Contractor shall draft and submit to the Grantee a U.S. Natural Gas Tri-Generation technology supplier directory in accordance with all requirements under this task, translated into Chinese.

Task 10: U.S. Experience in Tri-Cogeneration

The Contractor shall:

10a. Produce an overview of U.S. Tri-Cogeneration development and history

10b. Report on current U.S. federal policy on Tri-Cogeneration

10c. Report on current U.S. federal distributed energy policy

10d. Report on U.S. regulation of Tri-Cogeneration's grid inter-connection and relevant technical standards

10e. Report on U.S. Tri-Cogeneration's involvement in peak-shaving and analysis on how it affects grid peak-shaving.

10f. Report on the forecast and planning of thr U.S. Tri-Cogeneration industry

10g. Report on the U.S. consumption of natural gas resulting from Tri-Generation consumption, and analysis of guaranteeing sufficient supply of natural gas resources.

10h. Case study of a typical U.S. Tri-Generation Project (from project preparation to implementation and its operation)

10i. U.S. Tri-Generation equipment market analysis

10j. Prepare recommendations for China's effective use of Tri-Generation

Deliverable:

The Contractor shall prepare a report on the U.S. practices in Tri-Generation and recommendations for China's expanded use of Tri-Generation, in accordance with all items under this task.

Task 11: Final Report

The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive final report of all work performed under these Terms of Reference ("Final Report"). The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall be prepared in accordance with Clause I of Annex II of the Grant Agreement and be in the following format:

XI. Executive Summary
XII. Model projects selection
XIII. Technical Assessment
XIV. Economic Analysis
XV. Financial Analysis
XVI. Environmental Analysis
XVII. Policy and Regulatory Review
XVIII. Host Country Development Impacts Analysis
XIX. U.S. Natural Gas Tri-Generation Technology Supplier Directory
XX. U.S. Tri-Generation Study

In addition to any other required deliverables in accordance with Clause I of Annex II of the Grant Agreement, the Contractor shall provide both the Grantee and the USTDA with public versions of the final reports on CD-ROM. The CD-ROM versions shall include:

- Adobe Acrobat readable copies of all documents.
- Source files for all drawings in AutoCAD or Visio format.
- Source files for all documents in MS Office 2000 or later formats.

All reports shall be translated into Chinese. Both English and Chinese versions shall be submitted for approval.

Notes:

(4) The Contractor is responsible for compliance with U.S. export licensing requirements, if applicable, in the performance of the Terms of Reference.

(5) The Contractor and the Grantee shall be careful to ensure that the public version of the Final Report contains no security or confidential information.

(6) The Grantee and USTDA shall have an irrevocable, worldwide, royalty-free, non-exclusive right to use and distribute the Final Report and all work product that is developed under these Terms of Reference.

ANNEX 6

COMPANY INFORMATION

A. Company Profile

Provide the information listed below relative to the Offeror's firm. If the Offeror is proposing to subcontract some of the proposed work to another firm(s), the information below must be provided for each subcontractor.

1. Name of firm and business address (street address only), including telephone and fax numbers:

2. Year established (include predecessor companies and year(s) established, if appropriate).

3. Type of ownership (e.g. public, private or closely held).

4. If private or closely held company, provide list of shareholders and the percentage of their ownership.

5. List of directors and principal officers (President, Chief Executive Officer, Vice-President(s), Secretary and Treasurer; provide full names including first, middle and last). Please place an asterisk (*) next to the names of those principal officers who will be involved in the Feasibility Study.

6. If Offeror is a subsidiary, indicate if Offeror is a wholly-owned or partially-owned subsidiary. Provide the information requested in items 1 through 5 above for the Offeror's parent(s).

7. Project Manager's name, address, telephone number, e-mail address and fax number .

B. Offeror's Authorized Negotiator

Provide name, title, address, telephone number, e-mail address and fax number of the Offeror's authorized negotiator. The person cited shall be empowered to make binding commitments for the Offeror and its subcontractors, if any.

C. Negotiation Prerequisites

1. Discuss any current or anticipated commitments which may impact the ability of the Offeror or its subcontractors to complete the Feasibility Study as proposed and reflect such impact within the project schedule.

2. Identify any specific information which is needed from the Grantee before commencing contract negotiations.

D. Offeror's Representations

Please provide exceptions and/or explanations in the event that any of the following representations cannot be made:

1. Offeror is a corporation *[insert applicable type of entity if not a corporation]* duly organized, validly existing and in good standing under the laws of the State of _____. The Offeror has all the requisite corporate power and authority to conduct its business as presently conducted, to submit this proposal, and if selected, to execute and deliver a contract to the Grantee for the performance of the Feasibility Study. The Offeror is not debarred, suspended, or to the best of its knowledge or

belief, proposed for debarment, or ineligible for the award of contracts by any federal or state governmental agency or authority.

2. The Offeror has included, with this proposal, a certified copy of its Articles of Incorporation, and a certificate of good standing issued within one month of the date of its proposal by the State of _____. The Offeror commits to notify USTDA and the Grantee if they become aware of any change in their status in the state in which they are incorporated. USTDA retains the right to request an updated certificate of good standing.

3. Neither the Offeror nor any of its principal officers have, within the three-year period preceding this RFP, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.

4. Neither the Offeror, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 3 above.

5. There are no federal or state tax liens pending against the assets, property or business of the Offeror. The Offeror, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds $3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.

6. The Offeror has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The Offeror has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

The selected Offeror shall notify the Grantee and USTDA if any of the representations included in its proposal are no longer true and correct at the time of its entry into a contract with the Grantee.

Signed: _____
(Authorized Representative)

Print Name: _____

Title: _____

Date: _____

E. Subcontractor Profile

1. Name of firm and business address (street address only), including telephone and fax numbers.

2. Year established (include predecessor companies and year(s) established, if appropriate).

F. Subcontractor's Representations

If any of the following representations cannot be made, or if there are exceptions, the subcontractor must provide an explanation.

1. Subcontractor is a corporation *[insert applicable type of entity if not a corporation]* duly organized, validly existing and in good standing under the laws of the State of _____. The subcontractor has all the requisite corporate power and authority to conduct its business as presently conducted, to participate in this proposal, and if the Offeror is selected, to execute and deliver a subcontract to the Offeror for the performance of the Feasibility Study and to perform the Feasibility Study. The subcontractor is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment or ineligible for the award of contracts by any federal or state governmental agency or authority.

2. Neither the subcontractor nor any of its principal officers have, within the three-year period preceding this RFP, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or

destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.

3. Neither the subcontractor, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 2 above.

4. There are no federal or state tax liens pending against the assets, property or business of the subcontractor. The subcontractor, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds $3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.

5. The subcontractor has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The subcontractor has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

The selected subcontractor shall notify the Offeror, Grantee and USTDA if any of the representations included in this proposal are no longer true and correct at the time of the Offeror's entry into a contract with the Grantee.

Signed: _____
(Authorized Representative)

Print Name: _____

Title: _____

Date: _____